NATIONAL PETROLEUM NEWS

Vol. XVII Cleveland, Ohio, November 18, 1925 No. 46

Prairie Interests Secure Pipeline Outlet for Crude to Gulf Coast

By Lawrence E. Smith
N. P. N. Staff Writer

CLEVELAND, O., Nov. 16 THE Prairie Pipe Line Co. required for its principal shipper of oil, the Prairie Oil & Gas Co., an outlet from the Mid-Continent fields to the Gulf coast. The Pure Oil Co. required further strengthening of its position in the crude oil market in view of its refinery expansion program.

Hence, the Prairie Pipe Line Co. has acquired a half-interest in the Pure Oil Pipe Line Co. of Texas. The joint ownership of the system becomes effective on Dec. 31.

By this purchase, the Prairie Oil & Gas Co. secures a new customer for such amount of crude oil as it will require above the production from its own wells. Contractual arrangements to this effect have been made between the two companies. In addition, and probably of greater importance to the Prairie, the outlet to the Gulf coast permits the Prairie to meet the rates for delivery of Mid-Continent and Texas oil to Atlantic seaboard refineries.

Oil gathered in the Mid-Continent field by the Prairie has traveled to the company's Standard Oil customers through trunk line extending from Mexia, Texas, through Oklahoma and Kansas and to a point in Indiana, where it is delivered to other pipe line companies of the so-called Standard group.

Another trunk leaves the Mid-Continent-Chicago line and goes to Wood River, Ill., and there connects with the Illinois Pipe Line Co. system, which, in turn, connects with other lines to seaboard.

Thus, the entire trip for oil gathered by the Prairie goes from well to refinery by pipe line. For some years relatively small quantities of oil were shipped from Gulf coast terminals by tanker to seaboard refineries, but the principal development of water movement of Mid-Continent and southwestern production came in 1923, when California oil available to Atlantic refiners decreased.

Tanker fleets, used for the movement of California oil through Panama Canal and prior to that time for Mexican oil, were diverted to shipments of oil from Gulf coastal ports. Along with this came an increase in the Mid-Continent system of the Oklahoma Pipe Line Co., a Standard of New Jersey subsidiary, which ties into lines of the Standard Oil Co., of Louisiana, another New Jersey subsidiary, and enables the New Jersey company to move oil from Oklahoma direct to Baton Rouge where it is loaded on tank steamers. Increases were also made in the lines of the Humble Pipe Line Co., and the New Jersey company was further enabled to handle tanker shipments of Texas oil.

This caused a large falling off in the business of the Prairie, as the New Jersey company had been one of its large customers. Its pipe line rates could not be brought down to compete with the cheaper water haulage.

The Pure Oil Co. in 1922 laid its 8-inch line from Mexia, Texas, where it had acquired a substantial interest in the Humphreys properties, to Smith's Bluff, below Beaumont on the Neches river. This was to serve its refinery, built to operate on Mexia oil. Extensions were made later to tap the Currie and Powell fields. Total length of the line is 241 miles. Four pump stations were built and storage facilities amount to about eight million barrels.

Besides serving the Smith's Bluff refinery, the Pure line has carried oil for other Eastern refiners producing and purchasing in the Mexia-Powell district. Deliveries for its own account and others has generally exceeded a million barrels a month.

The Prairie, in 1922, put in a line from Jack county, Texas, where it connected with the trunk line from the Ranger district, to tap the Mexia field. This was an 8-inch welded line. With the newly acquired interest in the Pure line, shipments can be made from Kansas, Oklahoma, and north Texas fields to Beaumont terminal.

A significant statement by the Pure Oil Co. is that "the probabilities are that the Pure Oil Pipe Line Co. of Texas will, before very long, materially increase the capacity of the line." From this it may be concluded that the Prairie has in sight a greater outlet for crude oil to eastern seaboard plants, probably attended by a falling off in the amount shipped by trunk line eastward.

Some part of this increased business is in sight with the increase in capacity of the Pure Oil Co.'s refinery at Marcus Hook, near Philadelphia.

The new arrangement unquestionably means a strengthening of the position of the Prairie as the dominant buyer of oil in the Mid-Continent.

The Prairie Oil & Gas Co. long held the position of being the leading price maker in the Mid-Continent field, but its strength has been somewhat lessened within the past two years. The deal with the Pure Oil will restore a considerable measure of its strength. It has been working steadily toward that end for some time, as evidenced by arrangements to care for customers outside the Standard group. One such move came in 1924 when a 16-mile line was laid from its trunk line to Lockport, Ill., to supply The Texas Co. refinery. It has more recently been quietly taking on some new producing connections, a recent move in this respect being the taking over of producer connections of the Superior Oil Corp. in the Burkburnett district of Texas.

This year's deliveries by the Prairie Pipe Line Co., which virtually represent sales by the Prairie Oil & Gas Co. of produced and purchased crude, have already exceeded the business of 1924. The total for last year was 42,745,146 barrels while the deliveries for the 10 months of 1925 total 44,359,677 barrels. The best year in the history of the company was 1919 when total deliveries were 61 million barrels.

Two Michigan Tests Yield High Gravity Oil

By Lawrence E. Smith

N. P. N. Staff Writer

¶Results of wildcats at Saginaw call for further drilling of field.

The No. 1 well of the Saginaw Prospecting Co. is located on city property, just north of the city limits. This well is 1873 feet deep and is producing about 20 barrels daily of 43 gravity oil.

SAGINAW, MICH., Nov. 14

EVERY little while in this broad land a community becomes imbued with the idea oil is to be had nearby for the drilling of a well to sufficient depth. Upon one basis or another sufficient funds or what in the opinion of the zealous organizers are considered to be sufficient funds—are pledged and the test is started. Frequently it is spudded in with prayer and a barbecue.

Usually the test exhausts the funds or the formations, or both, as well as the patience of the community; and the local newspapers, which from the first refer to the venture as the "oil well", regretfully publish the obituary. As news consists of the unusual, it is a pleasure to chronicle here the fact that one such oil venture has turned out encouragingly. The Saginaw Prospecting Co., which differs somewhat from the general type of local wildcatting companies, has two oil producers in Saginaw county, central eastern part of Michigan, and the beginnings of what appears to be a fair field. This is a long way from other oil production and is the most encouraging test Michigan has had so far.

The company is made up of men financially capable of testing out the territory without recourse to any of the usual methods of paying the bills, such as selling stock or acreage. It is a closed corporation with nothing to sell except the oil it is producing and may henceforth produce. The writer is not going to say how much money is represented by this group, according to the hotel lobby gossip nor to dwell upon it further except to say that to him there isn't that much money in the world. The only reason the sordid topic of money is brought in at all is to establish this wildcatting venture as one of a different kind than is usually encountered.

Two Producing Wells

The situation at present is that two wells are on production—rather, one is now on and the other is shut down while an electric motor is being installed for pumping. Nine tank carloads of oil have been shipped. Two more tests will be drilled just as soon as they can be rigged up. Steel derricks for these are on the ground.

Not a great deal of excitement has been caused, as the venture has been attended by no drum beating or skyrockets. The company was not desirous of obtaining publicity, although the officials are cheerful enough about answering questions. The Ohio Oil Co. has taken several hundred acres hither and yon, most of it as near to the Saginaw company's block as possible. The discoverers hold between 2500 and 3000 acres, fairly compact. The Ohio has had men on the ground all the time since the first well came in late in August.

Some other companies, mostly small ones operating in Ohio and Indiana, have had representatives in the field, but the amount of acreage taken by them is not great. The leasing business was given a severe body blow about a week ago when an optimist from the Mid-Continent paid $1000 for a lease on 40 acres, about three-fourths of a mile from production. This tract had been withheld by the owner from all who had theretofore tried to lease it.

As no bonuses had been paid up to that time and leases had been made on the basis of two years' time to drill, one dollar an acre rental thereafter in lieu of drilling, the word spread quickly that Santa Claus had arrived and farmers started to talk bonuses. Needless to say,

in view of the uncertainty as to the future of the field's extent and performance, bonuses are in distinctly poor taste among those who take the serious view that the farmer can afford, in new territory, to gamble to the extent of permitting the wildcatter to disfigure a few square feet of land for the usual eighth royalty.

Right at City's Edge

The development is right on the northern edge of Saginaw. The first well, in fact, is located on city property—a tract of 33 acres acquired some time ago for a city waterworks pumping station site. It was further the intention to use the rest of the land for a city park. It now appears that the oil development has interfered with such purpose. It could be used for a zoo, though, as it already contains one wildcat.

The second well is 1800 feet west of No. 1, and thereby establishes a field that long. No. 3 well is to be a diagonal offset to No. 2—hardly offset distance away—but No. 4 will prove, if it is a producer, more territory than has already been proved. It is to be drilled nearly a half mile east of the discovery well. The field, it is thus seen, is moving east and west but no attempt is yet being made to test the north-south extent.

The company is being guided by geological advice, Mr. Reber, who came to Saginaw from California some months ago being responsible for the locations. Thus far he has a perfect record. Mr. Graves, president of the company, says present plans are not made beyond the two tests for which derricks are being built.

Officers of the company are James C. Graves, president; George L. Burrows, vice-president; Stuart G. Morley, secretary-treasurer. The directors are the foregoing and George Grant and Ernest A. Goff.

It is easy to see that if the No. 4 test, located as far in advance of production as it is, proves to be a paying well, something akin to excitement may prevail in Saginaw and drilling elsewhere in this region of Michigan will be done.

The Saginaw Prospecting Co. did not just happen to pick out a nice level spot to drill its first well. The location was made upon the basis of previous drilling, which will be dealt with further. The first test, located is Sec. 14, T., 12N., R. 4 E., in the southwest quarter of the northeast quarter, was started in July. Its destination was the so-called Saginaw "sand" which is really the Traverse limestone member of the Devonian. This Traverse formation is several hundred feet thick and in earlier tests had yielded high grade oil in a sandy or cherty limestone near the top of the formation, although not in commercial quantities.

Between 400 and 500 feet higher than the Traverse formation was to have been found, the Berea sandstone, lower Mississippian, which is a substantial oil horizon of Ohio and West Virginia—the famous Cabin Creek pool produces from the Berea—showed oil. The showing was so pronounced that it was decided to shoot it. The well was shot with 60 quarts after being drilled into the sand 35 feet and the result was an excellent flow which took the company unawares and without enough tankage to handle the situation. The well continued to flow for a substantial time, heading up and spilling enough oil to keep everybody interested and presently to compel them to find a market for the production. Then it was put on the pump and after pumping for a while, it would head up and flow some more.

After Aug. 28, when the well was shot, it averaged 23 barrels a day for three weeks and since that time and up to the past week when it was shut down to install electric pumping motor, it yielded its 19 or 20 barrels every day, making about one barrel of water.

This No. 1, or as it is sometimes called, Deirdorfer well—from the man who sold the land to the city of Saginaw—found top of the Berea at 1838 feet and was drilled in 35 feet making its total depth 1873 feet. It is cased to bottom, with packer at top of sand, and the two bottom joints are perforated.

No. 2 well, located in the southeast quarter of the northwest quarter of Sec. 14, same section as the discovery, is on the Egerer farm. It found the Berea higher than did No. 1. Top of sand was found at 1825 feet and it was drilled in 28 feet. Surface elevation of No. 2 is four feet lower than No. 1, which would make the top of the Berea nine feet higher than in No. 1. Normal dip is here to the west, so a reversal is clearly shown in these two wells.

Second Well Best

No. 2 is a better well than No. 1. It has made all the way from 35 to 40 barrels per day since it was shot with 80 quarts on Oct. 22. If it is not pumped it will head up and flow, but a better production is obtained by pumping. Owing to its having to flow through 2000 feet of two-inch line to the tank battery, it will not clear itself. This well also makes a little water, somewhat more than does No. 1, but not enough to bother. There is no doubt that the water is coming in from the sand which produces the oil and there is every reason to suspect that much deeper drilling into this sand would get a substantial dose of water,

Outline map of the state of Michigan, republished from National Petroleum News, Sept. 6, 1922 issue. Location of Saginaw field indicated by black circle. Designations of territory as favorable, etc., by Michigan Geological Survey.

James C. Graves

President of the Saginaw Prospecting Co. and vice-president and general manager of Saginaw Chemical Co. N. P. N. Staff Photo.

which, by the way, is about the bitterest, saltiest water that your relator ever tasted. Such water is economically important in this section of Michigan. Mr. Graves, president of the oil company, is vice-president and general manager of the Saginaw Chemical Co., whose family tree shows it to be related to the General Motors Co. This company recovers several products from water produced from the Marshall sand, a formation higher up than the Berea.

Both wells were drilled by Regan & Goll, Lancaster, O., drilling contractors. Louis Cline and John DeLong were the drillers. Frank A. Mechling, of Bremen, O., is field superintendent for the company. He was superintendent of the Overland Oil & Gas Co., of Bremen, until that company was sold early this year. Mr. Mechling is a forehanded man. He heard of the Saginaw venture and realizing that in the event paying production was found a superintendent would be needed, came along to dress tools just to be handy if and when the position of superintendent should be created. He was first in line and is busy superintending to the satisfaction of all.

Heavy Equipment Used

Both wells were drilled with 81-foot timber derricks and were fitted with 5-inch rig irons. Everything was heavy enough to make a comprehensive test, and it is probable that a deep test will yet be put down by this company. A dry hole in any of the future tests of this field or the exhaustion of the oil in either of the two present producing wells will mean deeper drilling.

The Berea sandstone, the pay formation, is gray, medium hard and is fine-grained here. There is about a foot of hard caprock and the oil is found in the top of the sand.

Casing record of No. 1 well is as follows: 145 feet of 10-inch drive pipe; 745 feet of 8¼-inch; 1873 feet of 6⅝-inch. The two lower joints of the last string are perforated to within 10 feet of bottom of the hole. Well is tubed with 2-inch, with flood nipple at top of the sand.

No. 2 well has 178 feet of 10-inch drive pipe; 758 feet of 8¼-inch and 1840 feet of 6⅝-inch.

Getting Ready for Winter

Both wells were drilled by steam and the next two will be also, although there is plenty of gas to operate gas engines. At the time of the writer's visit, Mr. Mechling was getting ready to turn gas under the boiler at No. 2 for pumping, although steam for pumping is presently to be replaced by electric power. General Electric 10-25 motors are to be used. This move is going to save a lot of trouble from freezing water lines the coming winter, and it surely does get cold in this part of the world. At considerable trouble and no little expense, water lines are being buried to the two new locations, water supply coming from city mains.

The new tests will be drilled with Moore steel derricks and 4½-inch irons.

The figure given for an all-inclusive cost of drilling one of these wells, putting oil in the tank, is $12,000.

High Grade Oil

The quality of the oil leaves nothing to be desired. A distillation test, made by one of the large refining companies, is shown in an accompanying tabulation. While this company gave the gravity of the oil as 42.5°, A .P. I., the Saginaw company's tests show it to average 43° and better. Probably the sample run by the refining company had suffered some evaporation loss.

Nine tank carloads have been shipped, some to the Sun Oil Co. at Toledo, O., and the rest to the refinery of the Canadian Oil Refineries, Ltd., Petrolia, Ontario. The latter company is affiliated with the National Refining Co., Cleveland, Ohio.

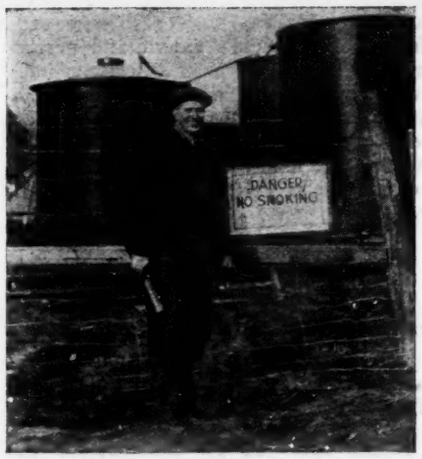
The log of the No. 2 well is also shown in an accompanying tabulation. Drilling is easy and with ordinary good luck a well can be put down in a month.

Now, how to account for this oil production at Saginaw? For reply, we shall call upon another Smith—Dr. Richard A. Smith, now director of the state geological survey, who in 1912 prepared a comprehensive bulletin on oil and gas in Michigan. Dr. R. C. Allen was then the state geologist. This work is styled Publication 14, Geological Series 11 and is a valuable manual for anyone who desires to inform himself on the factors

Correction

Tank wagon and service station prices of gasoline at Muskogee, Okla. in the tank wagon table of this issue, should be 15 cents and 18 cents respectively, including 3 cent state tax. A 2 cent reduction on Nov. 3 at Muskogee brought the tank wagon down to 15 cents.

Kerosene prices at Tulsa should be 12 cents, instead of 11 cents.



Frank Mechling, of Bremen, O., is superintendent for the Saginaw Prospecting Co. N. P. N. Staff Photo.

favorable and unfavorable to the discovery of oil and gas in Michigan. A number of wells have been drilled since 1912, of course, and a summary record of these up to 1922 can be found in the Sept. 6, 1922, issue of National Petroleum News, prepared by W. I. Robinson of the Michigan state survey.

Of the structural conditions of the region embracing Saginaw, Dr. Smith said:

"The term, Michigan Basin, is applied to a broad, shallow structural basin occupying part of western Ontario, the eastern half of the Northern and the whole of the Southern Peninsula of Michigan, eastern Wisconsin, northeastern Illinois, northern Indiana and northwestern Ohio. Its average diameter is about 500 miles and the deepest part appears to be near the geographical center of the Southern Peninsula.

"The formations constituting the Michigan Basin are locally gently folded and in some cases, slightly faulted. So far as is known the folds occur mainly near the margin of the Southern Peninsula and in Western Ontario. Of the anticlines or upward folds, the six best developed ones in the Southern Peninsula are in the vicinity of Saginaw, Port Huron, Stony Island (Detroit River), Wyandotte, Niles and Khagashewing Point (Little Traverse Bay.)"

The center of this basin, as determined from the hundreds of wells that have been drilled for brine, is about the city of Mount Pleasant, west of Saginaw. The local fold in which the Saginaw oil has accumulated has been known for a considerable time, as indicated in the statement of Dr. Smith quoted above. Under the heading of "The Saginaw Anticline," he says:

"Most of the evidence indicating favorable structural conditions for the occurrence of oil and gas in the region was derived from the numerous and comparatively shallow salt wells along Saginaw river, drawing brine from the upper Marshall sandstone.

"The center of the Michigan Basin appears to lie in Midland and Isabella

(Continued on page 39)

George H. Jones Succeeds A. C. Bedford as Chairman of New Jersey Board

NEW YORK, Nov. 16

THE directors of the Standard Oil Co. of New Jersey today elected George H. Jones chairman of the board of directors, succeeding the late A. C. Bedford.

Walter C. Teagle who had been looked upon as the logical successor to the chairmanship, preferred to remain president, it was announced, and is the chief executive officer of the company—which is a reversal of the relative importance of the two titles in this company.

The story of the success of Mr. Jones in the oil industry is the familiar one of the business man who rose by consistent application to his duties and a mind ever alert to grasp new knowledge. He was born in Carthage, New York, where his mother is still living. His father was a carpenter. He went through grammar school by borrowing the text books of a playmate, his family being unable to spare the money to buy books. His first regular employment was in a chair factory and he later worked in a knitting mill from 6 a.m. to 6 p.m. for which he was paid 35 cents a day.

When he saw that further regular attendance at school was out of the question, the boy secured employment in a Carthage insurance office. At the age of 15 he opened the office at 6 o'clock each morning, and in cold weather he started the fire in the stove to have the office ready for the other employees when they came in an hour later. After doing the chores of office boy, bookkeeper and correspondent he was sent out to deliver policies and to collect renewals. From that time he put in most of his evenings calling on prospects, and he sold some insurance for his employer.

The agent was so gratified at his clerk's industry that he called him in at the beginning of the second year to say that he was going to do better by him. "George, I paid you $3.00 for the first six months, and $5.00 for the last." he said. "Now I am going to increase that by paying you $4.50 a week for the entire year."

Studies "Silent" Typewriter

The clerk did not appreciate this advance and announced his intention of going away to school. He had saved $40 and thought he could supplement this and manage to get along. Some months before he had sent for a book on shorthand, and by constant study had learned the characters and word signs beyond forgetting. For practice he took every letter that came into the office and re-wrote it in shorthand. He had never had any practice with dictation, but he could write and read with great rapidity. He had never seen a typewriter up to the time there fell into his hands one day an old Remington catalog. On the back cover was a facsimile of the keyboard. This he cut out and pasted on a board, and with this board in front of him he proceeded to type out every letter he had previously condensed to shorthand. On the day before Christmas, which held no holiday significance to him, he left Carthage to enter a business school at Oswego.

George H. Jones

His anxiety to learn as rapidly as possible led the boy to neglect his sleep, and after three weeks of almost constant application his eyes failed him completely. The principle saw that it was useless to keep his energetic pupil indoors and decided to send him out as a salesman for the old Caligraph typewriter. This machine had 72 keys and weighed 55 pounds. The young salesman had to lug it around in one hand, while carrying his personal belongings in the other. He sold the machine by demonstration. He made $10.00 when he placed a machine, and sometimes had to prove its superiority over rival makes in competition with professional stenographers.

The National Transit Co. of Oil City, Pa., then a subsidiary of the Standard Oil Co. had sent a call to the Oswego school for a stenographer to whom they would pay $50.00 a month. George H. Jones was selected and told to report at Oil City. After a trial there he was given practically all of the letter writing to do and acquitted himself so well that his employer made his starting wage $60.00.

In spite of busy times in the National Transit Co. office Mr. Jones undertook the study of law at night. He had married and was anxious to improve his position. A neighbor called on Mrs. Jones one morning to ask if someone was ill in the house. She had seen a light in one of the rooms at two o'clock. Mrs. Jones told her that she would see that light on almost any morning at that time or even later. The Hon. M. F. Elliott, in later years to become general counsel for the Standard Oil Co. in New York, and Henry McSweeney, lent occasional assistance to these studies, and in 1892 Mr. Jones was

registered at Franklin. In 1897 he was transferred to Pittsburgh, where he did bookkeeping and accounting until five o'clock each afternoon and wrote the office letters until eleven. Two years later Mr. Jones was transferred to New York as secretary to Daniel O'Day, a well known Standard Oil official.

Recognized by Company

In this position Mr. Jones made with his own hands maps and charts of every pipe line in the country, showing the location and capacity of every pumping station. Later on he mastered all the details of the natural gas properties in the same way. The knowledge of these matters, his marvelous memory, his acquaintance with the law and his ability to take notes in shorthand made him an important figure in the preparation of the defense in the government's dissolution suit. From that time on he became a marked man and his advancement was more rapid. He was made a director on April 18, 1917 and treasurer Aug. 2, 1919. He was elected vice-president on Dec. 27, 1920. He is a member of St. Andrews and the Felham Country Clubs but rarely finds time to play. His home is in Pelham. He and Mrs. Jones have two daughters, both married, and three young grandchildren.

An old Standard Oil tradition that the door to the highest positions opens only from the inside is strengthened with the advancement of Mr. Jones from vice-president and treasurer to be chairman of the board, succeeding the late A. C. Bedford. Like Mr. Bedford, the new chairman spent a great many years in minor positions before anyone of importance noticed him. There is a story of real human interest in the association of the two men. From the year of Mr. Bedford's election as a director, nearly 19 years ago, they were close friends, and upon the successive promotions of Mr. Bedford the duties he had performed fell to Mr. Jones, and without exception his desks were, in a way of speaking, a corporate inheritance of Mr. Jones.

The new chairman is just a fraction of an inch under six feet. A pair of keen eyes that are seldom adorned with glasses relieve a serious face, which would be stern but for the twinkle that betrays a keen sense of humor. He is 53 years of age but looks some years younger for his face has the fresh color of a boy in his teens. He has a marvelous capacity for endurance, as he has shown times without number when he has worked around the clock to complete a difficult task which was wanted in a hurry. He has been just 35 years in reaching his present high position. In that time he has accumulated a marvelous store of information about the manifold ramifications of the petroleum business. There is hardly a department of the company with which he is not more than casually familiar. He has a lawyer's training; though he has never practiced. He is also well versed on the natural gas business, with which he has been closely identified. He is an authority on financial matters and has had charge of this end of the business for six years.

Wide Discussion of Future Supply Desirable

THE wider and more thorough the discussion of the report of the Committee of Eleven to the directors of the American Petroleum Institute, on the further supply and demand for petroleum, the better. This is probably the biggest subject before the industry in years as it holds the possibility of some form of government intervention in the oil industry in order to still further conserve future supply of oil.

The subject will not be closed for years, if ever. It is not new. It was discussed seriously in government circles a score of years ago. Several government attempts to estimate the then future supply were made. Such estimates have since been proved worthless, as they fell far short of what has since been produced.

In the oil industry the subject has been discussed for upwards of half a century, practically since the beginning of the industry. As each big field of production has subsided without another being within sight, oil company executives have debated whether petroleum was exhausted. While the wild-catter has always come to their rescue with a new field, nevertheless he has not proved up more than the particular fields he brought in.

The fear of a possible exhaustion of oil fields has forced the big oil companies—because they have such enormous investments—to great efforts to find new fields and to carry over in storage at tremendous cost the excess production that has come on the market from time to time.

The report of the Committee of Eleven necessarily is only, and can only be, an incident in the whole situation. The subject will be with us as long as there is any oil and no man can say how long that will be, neither does the Committee of Eleven say.

The subject that is really before the oil industry has two parts to it;

1—How long will the supply of oil in this country—and the world—last? The oil industry is obviously most vitally interested in this as the protection of its present investment and the character of its future development depends upon it.

2—Is all being done that can be done to conserve the supply of oil in the ground and is petroleum being applied to its greatest and most efficient uses?

The people, as represented by the government, are the ones who will pass the judgment.

The Committee of Eleven attacks the subject by undertaking to assure the industry and the public that it believes there is plenty of oil to take care of all needs until substitutes can be developed or other form of power discovered. However, that is simply opinion as there are no known means of ascertaining the amount of oil in the ground. The committee's opinion is based upon the most thorough survey that has been made in the history of the industry in which 250 technical men, some of the best in the oil business, took part.

But in the last analysis the report is simply the opinion of the eleven men who signed it and they are just eleven out of the 54 officers and directors of the Institute, only eleven out of some 3000 active members of the Institute and only eleven out of many hundreds of thousands of men actively engaged in the oil industry. However, the standing in the industry of these eleven men and the manner in which they made the survey, gives the report great weight.

Other men in the industry do not agree with the committee's findings. Men of excellent standing have publicly criticized the report. They say it is too optimistic and that the data which the committee presents, excellent as it is, does not warrant the assurance of safety as to future supply that the committee undertakes to give.

Until it comes, if it ever does, we shall always have before us the possibility of government intervention of some kind seeking to aid conservation of this most valuable resource. The greater our demand for petroleum, as the years go on, the greater and earlier the possibility of exhaustion, hence the hotter the discussion will be on what, if anything, the government should do about it.

All this means that the industry as a whole must get interested and stay interested in an intelligent fashion. That can best be done by the fullest discussion. We welcome the opportunity of printing all comments and papers that may properly aid this education of the industry and the development of the necessary facts and opinions on which the industry, and government, may have to act.—W.C.P.

Purchasing Agents Meet and Discuss Belt Problems

TULSA, Nov. 14

THAT oil companies are making a serious study of their belt troubles, in an effort to use the correct belt for the work to be done and to find out which type of belt is most desirable for various classes of service, was brought out at the last meeting of the Tulsa Purchasing Agents' association. The entire evening, following the usual "feed," was given over to talks and discussion on belts. In addition to the membership of the association, a number of oil company production men and engineers were present, together with many representatives of belt manufacturers.

It has been the practice of the association for the past year to designate certain meetings as "commodity nights," at which various commodities used in the oil industry are listed for discussion. In past meetings other subjects, such as paint, cordage, tires and wire lines have been discussed. In each instance, manufacturers have been invited to send representatives to the meeting and have responded, in several instances, by sending men especially from the home plant or office to address the purchasers. Discussion following the talks has always been helpful in bringing about broader knowledge of the commodity in question.

No set talks were arranged for the belt meeting. Representatives of makers of various kinds of belting spoke briefly on the proper use of belts and told of the methods used in their manufacture. After each talk, questions from the purchasers always followed in rapid-fire order, so that the meeting resulted in a quite thorough discussion of all classes of belts as applied to the oil industry.

A. H. Riney, chief engineer, Phillips Petroleum Co., and chairman of the belt standardization committee, American Petroleum Institute, was present at the meeting, and told of some of the aims of his committee. Members of the special committee appointed during the Petroleum Exposition to work out some sort of a specification for standard belting, also took part in the discussion. These are D. L. Trax, mechanical engineer, Gypsy Oil Co.; Glenver McConnell, mechanical engineer, Roxana Petroleum Corp.; and E. I. Bell, assistant to superintendent of production, Shaffer Oil & Refining Co.

William Warr, of the Manhattan Belting Co., and L. V. McAnnelly, of the Rossendale-Reddaway Co., were the principal speakers on the belt manufacturers' side. Both plead for more careful use of belts in the field, and also advised oil companies to be more careful in ascertaining the proper size and kind of belt to use for each piece of work.

Hollis P. Porter, production engineer, Gypsy Oil Co., said in a brief introductory talk, that up to two or three years ago, when the A. P. I. took up the question of standardized belting, little attention had been paid by the industry generally to the technical questions involved in selection of proper belts for different kinds of work. He said that the oil industry possibly imposed the severest service on belts, because of heavy loads and resultant low factor of safety.

Mr. McConnell, of the Roxana, said that his special committee had recently been making tests on various kinds of belting for the purpose of obtaining data for the preparation of specifications which are to be submitted to the A. P. I. after his committee and a committee of belt manufacturers have had a joint session some time in December. He stated that they were not trying to arrive at a complicated or hard and fast set of specifications, but are trying to find principal physical characteristics of belts that will lead to a simple means of differentiating between good and poor belts. They are aiming principally to formulate a set of standards which will specify minimum physical characteristics of belts, at the same time not retarding efforts of manufacturers to improve their products.

William Warr stated that belt manufacturers do not desire to be tied down by a set of specifications and doubted the practicability of adopting a set of standards that would cover all classes of belting. In discussing oil field belt service, he stated that belt manufacturers desire belts in service to have a factor of safety of 15; that is, that the stress applied to the belt should not exceed one-fifteenth of its tensile strength, but that this factor in oil service probably was not half that in most cases.

L. V. McAnnelly said that belts are the most abused articles used in oil fields, and asked that oil operators standardize on operation of belts as well as setting a standard for their manufacture. He told of tests made by his company on various pumping wells to determine work being done by the belt and found them with impulse loads running from 4500 to 22,000 pounds. He stated that many pumping belts are too short and that they have found that belts perform better as they approach 105 feet in length in this service. It was said during this discussion that, although proper belt tension varies with the load, a safe average was about 90 pounds per inch of width but this was greatly exceeded in the field. Many belts are ruined during their first three hours' service on account of having been put on too tight.

Rubber and leather belt men present agreed that pure castor oil is the best belt dressing and the only good one. No dressing containing mineral oil should ever be used, and grease also will ruin a belt eventually. For a 100-foot belt, two tablespoons of castor oil is the right amount; it should not be applied too freely or too frequently. The hair belt men said that castor oil was no good for their belts and that they had prepared a dressing exclusively for them.

Asked how much camel's hair actually is used in hair belts, Mr. McAnnelly said that "Camelhair" is a trade name, and that the belts do not necessarily contain hair from a camel. He stated that Reddaway started making camels' hair yarn belting in England in about 1870 and that then it contained mostly actual camels' hair, but since then various other kinds of hair have been found suitable.

Z. F. Harshton, Imperial Belting Co., and chairman of the A. P. I. belt manufacturers' committee, said that most belts in the oil fields are greatly overloaded. He showed by diagram and calculations on a blackboard how to figure the arc of contact, which, he said, is usually too small, and also demonstrated calculations used to determine load in foot-pounds on belts.

L. W. Teats, of the R. & J. Dick Co. spoke interestingly on balata, which is made from a tropical gum but is not rubber. While comparatively new in the oil industry, balata belting is an old product and is used extensively all over the world. He stated that one of the Dick brothers was a manufacturer of rubber and gutta percha products in Glasgow and became interested in balata through a cargo of it that came into his possession by accident. It was first used for shoe-soles and is used for that today in Europe. The R. & J. Dick Co. was the first to use balata for belts. Balata cannot be vulcanized as it melts at much lower temperature than rubber, and the duck used in making balata belts is impregnated with the material instead of being vulcanized to it.

Mr. Warr said that all oil companies should keep records of service obtained from belts and that a digest of such records from a number of oil companies would be much more valuable both to users and manufacturers than will the proposed set of specifications. V. C. Fuller, purchaser, Gypsy Oil Co., stated that his company does keep a belt record and is now engaged in weighing all its wells to determine actual load on belts.

Bulletin

Fast Wire Service

TULSA, Nov. 17.—Sinclair Oil & Gas Co's big well in the Garber field produced 18,184 barrels in its first 24 hours. This well is one of the largest that has been completed in Oklahoma in recent years. For the 24 hours ending Tuesday morning, total deep sand production in Garber was 70,363 barrels. (Details of this well published on page 41, this issue).

National Petroleum News

Compilation Of Mid-Continent Refinery Operations

All Rights Reserved to National Petroleum Publishing Co.

Western Refiners Increase Runs; Gasoline Shipments Fall Off

By Fast Wire Service

TULSA, Nov. 17

MID-CONTINENT refiners increased their rate of manufacture during the second week of November as a result of more satisfactory market prices.

Reports from 124 plants compiled by National Petroleum News covering the week ending Nov. 13 show an increase in still charges of 11,000 barrels per day or 3.9 per cent, to a daily average of 289,592 barrels of crude and partly refined oils.

Every group reporting with the exception of plants in north Louisiana and Arkansas showed increases in operations. Louisiana-Arkansas refiners cut their runs 3600 barrels per day. Kansas refiners reported only a minor increase of 1200 barrels per day while Oklahoma plants showed an increase of 6000 barrels and north and central Texas reported an increase of 7300 barrels per day.

Shipments of gasoline from the field as a whole declined 1,200,000 gallons as compared with the previous week and production increased 600,000 gallons but refiners were still able to keep their stocks virtually unchanged. The bulk of the decrease in gasoline shipments was reported by Oklahoma plants. Texas refiners increased their shipments 2.8 per cent to 6,368,079 with the aid of recent export buying in that area.

Taking the field as a whole, gasoline production was 27,276,659 gallons and shipments 27,347,066 gallons causing a reduction in stocks of 70,000 gallons to 51,161,249 gallons.

Kerosene production was speeded up 12 per cent to meet the heavy demand of recent weeks but shipments fell slightly during the week with the result that there was an accumulation of 680,000 gallons and total stocks on Nov. 13 were 14,767,649 gallons.

Shipments of gas and fuel oil continued their steady increase which has been noted for several weeks and reached a total of 40,740,998 gallons for the week as compared with 36,358,703 gallons during the week ending Nov. 6. In spite of the increase of four million gallons in production refiners drew 4,700,000 gallons from stocks bringing inventories of heavy oils down to 192,205,010 gallons a decrease of 17,083,785 gallons from the report of Oct. 16.

Gasoline stocks on Nov. 13 represented 13 days supply at the current rate of shipment, kerosene 19 days and gas and fuel oil 33 days.

Summary for Month

Production and shipments, all reporting refineries for four weeks ended Nov. 13. Change in stocks figured from Oct. 16.

	Gallons
Gasoline	
Production	112,001,527
Shipments	115,021,749
Net change in stocks	—3,020,222
Ratio sales to production	102.7%
Kerosene	
Production	22,270,366
Shipments	22,988,073
Net change in stocks	—717,707
Ratio sales to production	103.2%
Gas and Fuel Oil	
Production	142,775,661
Shipments	159,859,446
Net change in stocks	—17,083,785
Ratio sales to production	112.0%

SOMERSET, TEX.—The Southern Refining Co., San Antonio, has its new fractionating tower in operation, reports R. A. Elmore, assistant superintendent here.

Mid-Continent Refinery Operations Week Ended Nov. 13 (By Fast Wire)

	Kansas	%Change Previous Week	Oklahoma	%Change Previous Week	No. & Cent. Texas	%Change Previous Week	No. La.-Ark.	%Change Previous Week	Total	%Change Previous Week	Totals Week Ended Oct. 16
No. of Plants	23		46		41		14		124		124
Da. Still Cap. (bbl.)	98,200		165,900		144,300		51,700		460,100		460,100
Da. Av. Crude Run	53,933		87,874		61,691		30,001		233,499		247,344
Da. Av. other oils	13,232		21,156		10,408		11,297		56,093		55,393
Da. Av. Total to Stills	67,165	+ 1.8	109,030	+ 5.8	72,099	+11.3	41,298	— 7.9	289,592	+ 3.9	302,737
GASOLINE—Gallons											
Stocks Nov. 6	7,923,977		25,066,455		14,786,418		3,454,806		51,231,656		53,638,263
Prod. 11-6 to 11-13	7,404,972	+ 3.8	11,024,017	— 0.4	6,698,527	+11.2	2,149,143	—12.9	27,276,659	+ 2.2	29,484,519
Ship. 11-6 to 11-13	8,047,266	+ 5.2	10,953,534	—13.1	6,368,078	+ 2.8	1,978,187	— 3.9	27,347,066	— 4.1	28,941,311
Stocks Nov. 13	7,281,683	— 8.1	25,136,938	+ 0.3	15,116,866	+ 2.2	3,625,762	+ 4.9	51,161,249	— 0.1	54,181,471
Ratio Sales to Prod.	108.7%		99.4%		95.1%		92.0%		100.3%		98.2%
KEROSENE—Gallons											
Stocks Nov. 6	5,786,576		3,248,278		4,731,213		318,920		14,084,987		15,134,490
Prod. 11-6 to 11-13	1,890,686	+18.5	2,326,625	+43.0	1,694,858	—13.9	342,259	—13.4	6,254,428	+12.0	5,860,851
Ship. 11-6 to 11-13	1,875,270	+14.7	1,948,398	+15.3	1,324,183	—33.5	434,915	— 1.5	5,571,766	— 3.0	5,509,985
Stocks Nov. 13	5,801,992	+ 0.3	3,626,505	+11.6	5,101,888	+ 7.8	237,264	—25.6	14,767,649	+ 4.8	15,485,356
Ratio Sales to Prod.	99.2%		83.7%		78.1%		123.9%		89.1%		94.0%
GAS AND FUEL OILS—Gallons											
Stocks Nov. 6	21,604,624		103,943,337		48,165,439		23,200,844		196,914,244		211,215,145
Prod. 11-6 to 11-13	7,725,814	+ 7.9	10,503,533	+31.1	9,315,377	+27.8	8,487,040	—10.7	36,031,764	+12.7	36,509,089
Ship. 11-6 to 11-13	8,539,366	+29.7	11,759,013	+12.9	11,205,085	+16.1	9,237,534	— 4.8	40,740,998	+12.1	38,435,439
Stocks Nov. 13	20,791,072	—3.8	102,687,857	— 1.2	46,275,731	— 3.9	22,450,350	— 3.2	192,205,010	— 2.4	209,288,795
Ratio Sales to Prod.	110.5%		112.0%		120.3%		108.8%		113.1%		105.3%

Illinois Petroleum Marketers Hold Lively Session

Staff Special

CHICAGO, Nov. 13

MEMBERSHIP dues in the Illinois Petroleum Marketers Association were raised from $15 to $60 a year by vote in its convention in Springfield Nov. 12. The increased revenue was voted to finance a full time paid field secretary. The man is still to be chosen, but Secretary J. B. Kelly of the Corn Belt Oil Co., Bloomington, Ill., has enlisted the help of Dean Charles M. Thompson of the department of economics at the state university to help find the right man. Dean Thompson acknowledges that Mr. Kelly's standards are high.

The convention was held in the Elks Club in Springfield and the attendance was larger than anybody had expected. Registration was free and is generally believed to have been unanimous, the list actually carrying the names of all those present. The registration list is not available but covers were laid for 180 guests at lunch time and more than half of them wore red tags which showed them to be Illinois jobbers. The most remarkable development was that 52 new applications for membership in the association were filed with the secretary.

The forenoon session of the meeting was closed, attended only by Illinois jobbers and the persons they had selected to speak for them. The main topic was the Illinois price war precipitated this spring by the Larkin Soap Co. of Buffalo with a branch office and warehouse in Peoria. As nearly everybody in the oil business knows, that firm started a cut-rate service station in Peoria and demoralized the market there, later establishing another such station in Decatur. The influence of these two stations has worked literal havoc to the oil marketing business all over the state; but mostly in that central region. In Peoria, it was brought out, only four Independent companies are still operating out of 12 doing business there this spring.

Negotiations on Foot

Although the details of the negotiations were withheld from the great majority of the oil men at the meeting, it became known during the day that the Peoria jobbers have hopes of ending the price war. It is said that they have presented their side of the proposition so successfully to the officials of the Larkin Soap Co. that the latter is considering permanent discontinuance of its gasoline department.

At a meeting of the Illinois jobbers a month ago in Belleville, Ill., a committee was provided for to negotiate with the officials of the mail order house. That committee existed only in skeleton form. The president of the Illinois association was to appoint part of it, and two national associations were to have provided one member each. Nothing has been done about it, however, as the committee has not been appointed and will not be (according to agreement at the Springfield meeting) until the Peoria jobbers have done their best to settle the matter in the way they have begun.

H. G. James, secretary and manager of the American Oil Men's Association, 624 South Michigan av., Chicago, addressed the Springfield meeting in the forenoon. His talk had to do with the advantages of a well financed state association with an active paid secretary of ability. In the course of his talk he related some of the details of the settlement of the price war in Kansas City three weeks ago. It was there that Mr. James had an active part in mediating the differences between oil marketers and effecting a truce in the price war that was four years old.

An Established Program

Mayor T. M. Bullard of Springfield delivered the address of welcome to the oil men's convention at luncheon. He was followed on the program by C. J. Doyle, the first state fire marshal and more recently secretary of state, who now is associated with a fire insurance company. The first speaker before the afternoon gathering was J. H. Camlin of Rockford, president of the Illinois Chamber of Commerce and a director in the U. S. Chamber of Commerce.

All the speakers from without the industry discussed the advantages of co-operation among men in the same business. In fact this was a "Co-operation" meeting. C. L. Maguire, Northland Oil Co., Chicago, the headline speaker of the afternoon session, arrived 45 minutes after the platform was ready for his occupancy. During the interim the Illinois jobbers were led into a discussion of the program and policies of the National Petroleum Marketers' Association, viz., the national advertising campaign of Independent Oil, the national Independent coupon exchange, the national distribution of Red Hat gasoline, and the collective buying department. Due to the nearness of the annual convention of the N. P. M. A. most of its officials were in Louisville and there was nobody in Springfield to represent it.

Since the beginning of national jobbers' associations they have been governed by a board of directors elected at a national convention, and managed by a secretary or an executive director. In the case of the N. P. M. A. that has been changed slightly and the direct management is in the hands of the elected president. In any case, no national oil association has ever functioned as a "parent" organization with authority over state associations. At present the policy of the N. P. M. A. is opposed to that.

It was this particular aspect of the national jobbers' organization that the Illinois group attacked. Secretary Kelly stated emphatically that he thought the N. P. M. A. ought to be a representative body. That state associations ought to elect delegates at their annual meetings to attend the annual meeting of the national association and have a voice in its affairs—thus to place the national body more in touch with the local problems of state associations and the individual jobbers. His plan of organization for a jobbers' association was something after the order of a labor union's organization plan.

A great many views were expressed on this and related matters before Mr. Maguire arrived, and when he began to talk he selected the "National Distribution of Red Hat Gasoline" as his topic. Near the close of his address Mr. Maguire was questioned from the floor, and in the course of the "Q and A" dialogue somebody proposed that the subject of Red Hat and the N. P. M. A. program be forever barred from the floor of Illinois jobbers meetings, calling the topic an habitual source of discord and contention.

Thus rebuffed, Mr. Maguire tried gracefully to "bow himself out," but Mr. Kelly came to his support, declaring he had come at his (Kelly's) personal request. So Mr. Maguire continued, saying that critics of the N. P. M. A. were aiding the enemies of organized competition which the big companies dread and oppose.

"Keep Associations Active"

"Always see what interest is represented when an organization of Independents is opposed," he said. "Do not let your associations, state or national, be broken up by petty grievances. Independent oil men can get together on the thousand and one things they have in common and forget about their personal dislikes and local grievances. It is for their own good and their own protection against strongly organized units."

The last activity of the meeting was a pledge made by the oil men present (especially those in districts where the Illinois price disturbance has been most severe) to go to their home communities, call meetings of the oil men in their respective towns, organize city or county petroleum clubs, and be ready when the secretary is employed to have mediums through which he may work.

NEW YORK, Nov.16—Directors of the Standard Oil Co. of New Jersey authorize the statement that no plan is under consideration for the retiring of $200,000,000 of preferred stock. The report has been published in several newspapers.

Novel Greasing Rack Builds Trade For Indian Refining Co.

By Ward K. Halbert
N. P. N. Staff Writer

EVANSVILLE, IND., Nov. 16. INDIAN Refining Co., through its marketing department, has placed its second mechanical novelty at the service of the motoring public. What has been accomplished in good will and general publicity by the Wasson Motor check in the last year has proved to the officials of the company that motorists like novelties, have a head for mechanics, and are interested in their automobiles. So while the Wasson Motor Check is still going strong in the big cities of the country, the Indian refining Co. has installed something new.

In dignified language the new service device is called "Rotary Lift" but the boys around the service station call it a "turntable" and the term is too apropos to be shaken easily. And after all it does not make much difference what the public calls it, so long as they talk about it and their remarks are favorable. Thus far, that has been the case in Evansville where the first Rotary Lift was placed in service. It has been the sensation of the motoring season here and F. A. Eggert of the sales department says:

"Our experience to date has taught us, not only that profits are beyond our fondest expectations through added grease and oil sales, but the advertising incidental to the Rotary Lift has increased gasoline sales materially."

Performs Peculiar Service

The Rotary Lift must not be looked upon as a mechanical toy of a spectacular sort with merit as an advertisement only. The device performs a service peculiar to itself. Moreover, the Indian's sales plan that goes along with it, and is being put in effect at all stations where a turntable is installed, has some constructive merit of its own also.

All readers of National Petroleum News know that the Indian Refining Co. is offering to Independent jobbers and service station men all over the country a proposition they call the "Havoline Franchise." Through this they plan to build a consistent and uniform demand for their lubricants. Along with this franchise goes the Wasson Motor Check, the Rotary Lift, the merchandising system and probably first call on all the good ideas the Indian organization may work out in the future, but that is all apart from the purpose of this story, which attempts to go into the principles of their new and successful selling idea.

It is generally conceded among automobile men that the average motorist needs more lubricating service than he gets. It would be profitable to him as well as to the oil men if owners of automobiles would submit to thorough lubrication service. The Motor-n-All plan evolved by the Indian Refining Co. is a means of inducing motorists to take all the lubrication they need.

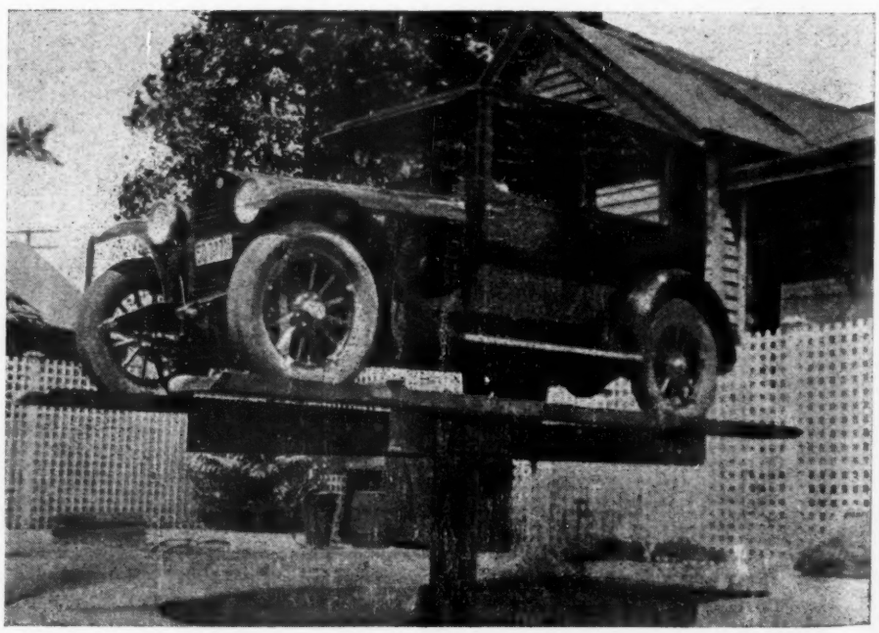
Of course a service station man can lubricate a whole automobile from the bumper to the nuts on the tire rack at one operation with less expense than at a half-dozen or more operations. He can afford to give a discount by doing it all at once. A motorist feels entitled to a discount on a big job of oiling like that. Maybe he does not think his car needs oiling all over, but he can be persuaded that he might as well begin having it all done at once if he is shown a respectable saving thereby. That is the whole psychology of the Motor-n-All idea.

But the benefits are plentiful. The oil man who puts it over is sure of a harvest for there is money in lubrication. By doing the whole oiling job at one sitting the oil man sells more goods in less time. The average automobile has places for oil that its owner never heard about, so by contracting to do a complete job the oil man puts grease into neglected cups where it is much needed. The greasing is a complete job and a good one and the owner is pleased with it so he goes back to the same place next time. It has worked out that way at the Indian stations.

Of course the Motor-n-All plan could have been put across with the same old drain pits and greasing racks that the Indian Refining Co. had last year, but it would not have gone over so fast as with the Rotary Lift. The Lift is a novelty and an efficient greasing rack too. It has the old-fashioned carpenter jobs definitely relegated to the scrap heap. It attracts attention and makes people come into a service station and ask questions.

When a man with an automobile drives into a service station and points to the contrivance shown in the accompanying picture saying, "Now what the 'ell is that?" the attendant has a chance to put the whole business across and make a customer. Of course some service station men might yawn and say, "Why, that's our new grease rack," but if he does his boss ought to have been out looking for his successor the day before. They don't make any such mistakes as that at an Indian Refining Co. station. They are likely to say:

"Oh, yes, that's the place where we give our Motor-n-All service. You see we have a flat rate for oiling an automobile everywhere it needs oil, all at once. Your's is an Oakland and I can tell you off-hand that the price is $3, but there is a chart over there by the air stand that shows the flat rate on all different cars. This new elevator lifts a car right up where we can see under it and through it, and when we finish a



Rotary Lift when the greasing process is in progress. The lowest point on the automobile tire is four feet from the operator's stance.

job like that we have oil every place where oil ought to be; and it doesn't take long; about 15 minutes on the average."

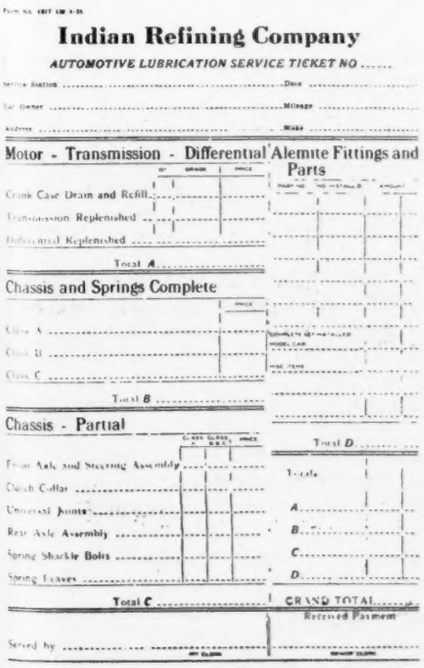
As a matter of fact there is no natural hook-up between the Motor-n-All and the Rotary Lift. The lift would be a good greasing rack in the most obscure garage in the country. And the flat price plan of lubricating automobiles is a sound principle on a greasing rack of any sort. But they adapt themselves to each other well and, in as much as they started out together, they are hard to consider apart. They are "happily married," as it were.

Rotary Lift Design

The Rotary Lift was invented by a Memphis man who spent the most of his active life working in a garage. His name is P. J. Luniti and is popularly called "Pete." The first ones were made on a contract by a Memphis firm of his selection. Mechanically it is as simple as any greasing rack in use except possibly the original wooden or steel elevation accessible by ramp. It works on the same principle as a hydraulic elevator, such as in used in modern office buildings, except that the pressure is exerted with air instead of water.

The accompanying illustrations are photographs taken at the Indian Refining Co. service station at Tenth St., Lincoln Ave., and Canal St. in Evansville. It is the first one ever built and upon the record it established, others are being installed at various points in the five states which the company has stations.

When an automobile approaches the Rotary Lift, the Lift is flush with the driveway. There are two parallel channel irons lying across a circular depression in the pavement. The depression is about 14 inches deep and is made to contain the steel supports of the channel irons. The motorist drives right on the elevator without getting off the grade of the station drive.



Indian Refining Company

AUTOMOTIVE LUBRICATION SERVICE TICKET NO .....

Service Station ..... Date .....

Car Owner ..... Mileage .....

Address ..... Make .....

Motor - Transmission - Differential — Alemite Fittings and Parts

Crank Case Drain and Refill

Transmission Replenished

Differential Replenished

Total A

Chassis and Springs Complete

Class A

Class B

Class C

Total B

Chassis - Partial

Front Axle and Steering Assembly

Clutch Collar

Universal Joints

Rear Axle Assembly

Spring Shackle Bolts

Spring Leaves

Total C

Total D

Totals

A

B

C

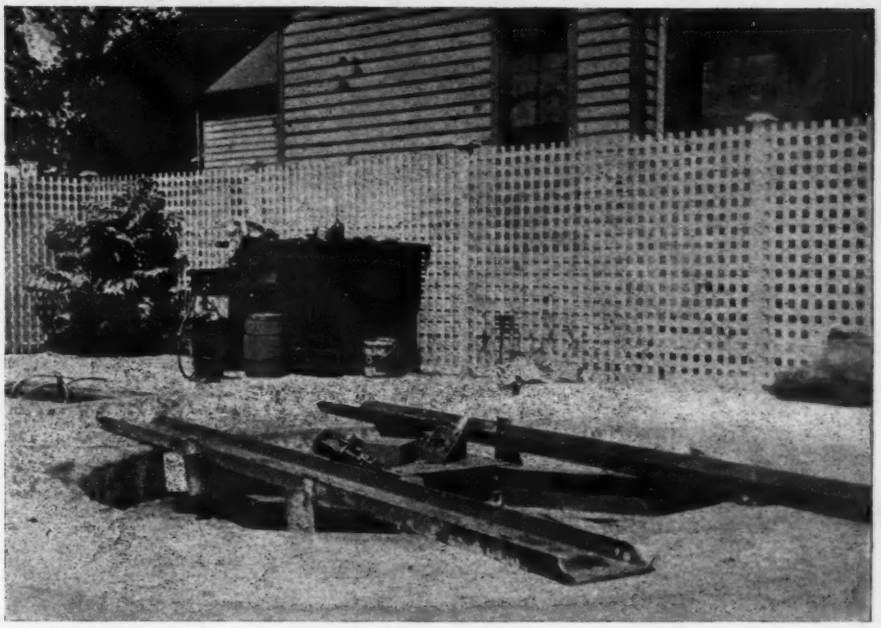
D

GRAND TOTAL

Received Payment

Served by .....

This is the form of complete lubricating service ticket used by the Indian Refining Co. in its flat charge system.



The Rotary Lift flush with the grade of the drive ready to receive an automobile.

The air compressor in the service station is brought into action soon after the automobile has been made secure on the rack with the metal blocks attached to the channel irons. The air pressure forces the shaft out of the ground and lifts the channel irons and their I-beam braces to an elevation of 4 feet from the bottom of the depression. The steel shaft is 10 inches in diameter and it requires less than 40 seconds to elevate it. Thus the automobile is poised on a one-legged stand high enough for a man to stand under it erect and comfortably. Left in this position over night the shaft will not sink appreciably.

Engineering of Lift

The area of a cross section of the 10-inch shaft is 78½ square inches. If the air exerts a pressure of 100 pounds per square inch it accomplishes a lifting pressure of 7800 pounds. The weight of the superstructure of the lift itself is 1200 pounds, leaving net force enough to lift a car weighing 6600 pounds.

Pressure can be had from any one of several air compressors common about service stations to the extent of 150 pounds per square inch. That provides a net lifting force of more than 10,000 pounds, which is sufficient to raise any automobile in the passenger car class. Of course this is rather hard on a compressor, in that it has to do more work than is expected of it ordinarily.

Most well-known compressors can store 2 cubic feet of free air per minute. In order to lift one car 4 feet with the Rotary Lift the compressor must provide 25 or 30 cubic feet of free air. This means that the compressor must work 15 or 20 minutes for each car lifted. In serving 14 cars a day the compressor would have to put in four hours work on nothing else; and service station compressors have other things to do also.

Of course there are compressors that handle 5 or 6 cubic feet of free air per minute, and they are recommended by Indian Refining Co. engineers for this character of work. The smaller machines will do the work if they are made to do it but they suffer more than the larger ones. Heat is generated in compressing air, and steady operation, of a compressor with few chances and short periods in which to cool are severe operating conditions. Of course where a Lift is installed at an old station that has a small compressor already in use, the compressor's life will be shortened but it can then be replaced with a larger model after it has been put out of commission.

As soon as an operator has his customer's car on the Lift he approaches it in a methodical way. While it is on the level he takes care of oiling all parts under the hood and inside the hub caps. Then he raises it and looks more closly at its internal workings. There he takes care of the rear end and transmission and injects grease into the cups all around. The third operation is to jack the body of the car up so the weight will

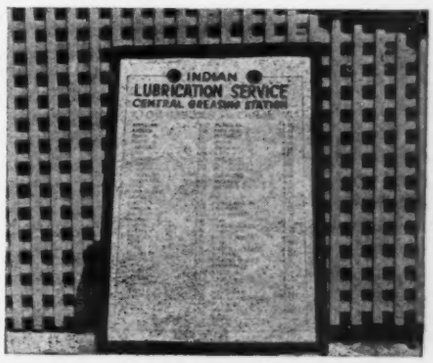


Chart on every service station yards shows the passing trade what they will have to pay for Motor-n-All service on the new turn-table.

be off the springs. In this condition it is possible to thrust an ordinary business letter between the leaves of the springs, and with this advantage the springs are oiled. Penetrating oil is forced between the leaves with a paint gun under pressure of 180 pounds.

To get off an ordinary greasing rack the motorist must either drive or back down an incline, and when that is accomplished he is often headed wrong and has to maneuver a while before he can drive away. This is eliminated with the turntable. While the air is escaping and the car is slowly sinking to the ground level, the operator turns the whole contrivance so the automobile is headed out the right direction. One distinct feature of the Rotary Lift is that it would operate just as well at the back end of a blind alley as in the middle of a 5-acre lot.

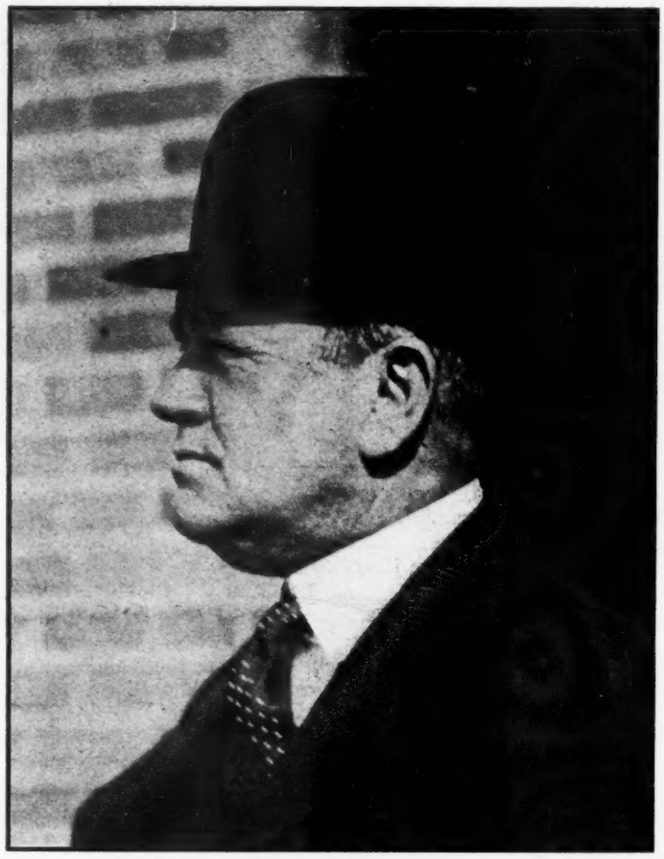
Auxiliary Oiling Racks

Although the Rotary Lift serves conveniently as a greasing rack, nevertheless its chief purpose is to expedite work with the pressure greasing connections and on the springs. In case there is a lot of rubbing to do or other operations that consume too much time for the expensive machine, the car can be run off the Rotary Lift to an ordinary greasing rack. At one of the Indian Refining Co's. stations three greasing racks are so placed that they radiate from the moving circumference of the channel irons. The Lift may be used to raise three cars from the ground to be examined and greased, and then the table may be turned so each car can be rolled on a stationary rack to receive its ordinary treatments.

The accompanying drawing shows where a Rotary Lift has been installed with two additional racks. An automobile may be returned to the ground by way of the Lift or it may be driven directly off the auxiliary rack to the ground, via an incline. This auxiliary equipment detracts somewhat from the spectacular appearance of the Rotary Lift and discounts its advertising value to some extent, it is thought. For this reason Indian Refining Co. officials advise their district managers to consider carefully before building auxiliary racks. The lifts themselves cost only about $550 and it is conceded that two lifts are better in some ways than any number of auxiliary racks.

Most any motorist harbors a wish, probably that he could have every squeak eliminated and every moving part of his machine oiled at once. When the service is offered it is a strong temptation to any motorist to have his car oiled completely whether he thinks it needs oiling everywhere or not. To overcome this little resistance, the service station man shows him a chart from which he can figure out his own personal saving by having his oiling done all at once, "Motor-n-All." The chart is in a big frame behind glass and stands nearly as high as the fence around the service station lot. The accompanying table tells the chart's story, as it applies to several makes of automobiles.

Col. U. G. Lyons Heads New Refining Company



Col. U. G. Lyons

WARREN, PA., Nov 16.—Col. U. G. Lyons, one of the most widely known of the Pennsylvania refiners, has organized a new company known as the Lyons Refining Co. and has bought the refinery of the Crown Central Petroleum Co., at Clarendon, Pa. This plant is the former White Oil Corp. refinery and was acquired by A. C. Woodman and associates when the Crown Central was formed to take over the physical assets of the White Oil Corp.

Colonel Lyons was for several terms president of the National Petroleum Association and for many years head of the Conewango Refining Co., from which he retired a few months ago.

The Lyons Refining Co. is a Pennsylvania corporation. Col. Lyons is president and sole owner, he states. George Higgins, who was general manager of the Conewango Refining Co., is secretary. Alice B. Wilson, who was cashier of the Conewango, is treasurer of the new company.

The refinery which he has taken over has a crude capacity of 2000 barrels a day, Col. Lyons says, and notwithstanding that it had been idle for about two years, it is in excellent condition. In fact, refining operations have already been begun and the colonel says the plant will be running to capacity before the end of the month.

Five gathering lines bring crude oil to the refinery from the Clarendon field and the colonel says that he is in position to get western crude through the Prairie Oil & Gas Co. whenever he wants it. The company's products will be sold in the open market, Colonel Lyons says.

He also states that he retains his interest in the Conewango Refining Co.

Prof. Johnson To Talk Over Radio

PITTSBURGH, PA., Nov. 16.—Radio fans in the oil industry will be interested to learn that Roswell H. Johnson, professor of oil and gas production, School of Mines, is included on the November program at station KDKA, University of Pittsburgh broadcasting station.

Prof. Johnson's first talk, which will be on the origin and accumulation of oil and gas, will be broadcast at 7:45 p. m., eastern time, on Nov. 18. His second talk, on oil finding, will be on the air at the same time on Nov. 25.

Small Card File Simplifies The Records For Refinery Sales Manager

By J. C. Chatfield
N. P. N. Staff Writer

TULSA, Nov. 16 C. W. RICE, sales manager of the Vickers Petroleum Co., has devised a card system which gives him a complete picture of the business relationship of each jobber customer with the company. The system is simple in its operation yet it gives information at a glance which could be gotten only by consulting a bulky file in many refinery sales offices.

Two separate card records of customers have been maintained by Mr. Rice until recently. One record showed the date and character of sales effort expended on the customer. This was given on the face of the card while on the reverse side, notes were made regarding the credit standing, volume of business and other pertinent facts concerning the business of the customer.

A separate card for each customer was kept as a sales record. On this card the date of each sale, order number, number of cars sold, gravity and grade of product as well as price was shown. To get a complete picture of the relationship of the selling company to the jobber it was necessary for Mr. Rice or his assistant to consult both files.

Complete Record on Cards

On this page is a reproduction of one of the new record cards which shows both sales effort and sales on its face and credit and other information on its reverse side. The method of recording sales is indicated.

On the former sales effort card spaces were provided for each day for an entire year. It was found in actual practice, however, that there are very few instances where it is necessary or desirable to expend sales effort on a customer or prospect more than once in a single week. For that reason the new card gives but one space for each week in the month.

As a result of the economy of space, it was possible to combine both records on a single card. And in place of the card reflecting only one year's business transactions, the new card has space for two years.

Method of Contact

Four symbols are used in the report of calls to indicate the method of contact with the customer. Personal calls of salesmen are marked P. The letter is followed by a number to indicate who made the call. If the contact is by long distance telephone the letter T is used and on telegrams giving price quotations W is the symbol. When a sales letter is sent to a customer which includes quotations the letter L is used.

In the record of sales, letters are used to indicate the product sold with figures to show price per gallon. Following are the product symbols; G, gasoline; K, kerosene; D, home heating distillate; and F, fuel oil. The accompanying reproduction of a record card shows the information typed on but in actual practice this is done with pen and ink so that two or three entries may be made without difficulty in a single week's square.

Follow Up Customers

With the card record it is easy for Mr. Rice to keep before him the volume of Vickers products being bought by each customer. If there is a gap in entries on the sales record an investigation is made as to the cause and sales effort increased if necessary. Should it be found that a jobber has contracted for part or all of his requirements with a competing refiner that information is entered on the back of the card. A notation is made regarding date of expiration of the sales agreement so that the account can be solicited vigorously when the proper time arrives.

A great many refinery sales managers keep a pad on their desks at all times on which telephone conversations are listed. Mr. Rice has the same system. He notes the name of the party called, quotations offered and sales made. The record shows telegraphic and letter quotations as well.

At the close of the day this quotation record sheet is taken by a clerk and postings made on the customers' record cards. Reports of personal calls are entered when salesmen on the road send in their written reports.

Sales Entries Made

Sales are not entered on the card until invoices are made out. The sales entries are made direct from invoices as they come from the accounting department. Knowledge of the card clerk that these invoices must be returned quickly is an aid in keeping the card record complete.

A complete daily situation report is on the sales manager's desk each morning. This report shows the number of cars of material sold to date as compared with the previous month, instructions on hand and finished products available for sale and shipment. The situation report is used as a basis to start from in planning sales work for the day.

Customers' record cards in the Kardex file are flagged to indicate commodities used. Gasoline and kerosene customers have cards flagged with yellow, distillate green, and gas and fuel customers are flagged with blue. With these flags it is possible to assemble a group of prospects for sales effort very quickly when the daily situation report shows a current surplus of any commodity.

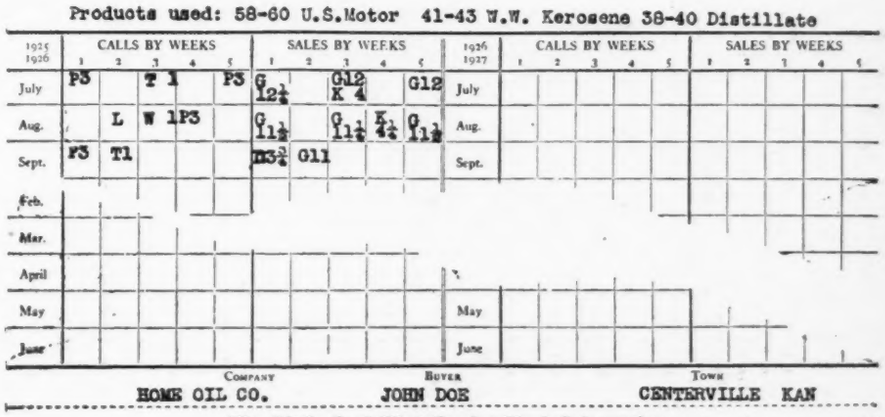
It is possible to flag the cards by days or weeks to aid in keeping sales effort continuous. A customer who places orders ordinarily twice a month may have his card flagged to come up on certain dates so that a wire may be sent or a telephone call put through.

Duplication Avoided

Duplication of sales effort is avoided by the record. For example, Mr. Rice called one of his customers before having the system in force and asked him if he wasn't about due for a car of gasoline. The customer replied that he had just finished unloading a car of Vickers gasoline. It had happened that a sale was made by Mr. Rice's assistant a week before when Mr. Rice was away. The new record card would have showed the call and sale if it had been in use at that time and would have saved some expense and embarrassment.

The invoice system of the Vickers Petroleum Co. is one which saves two

(Continued on page 39)



The Little Card That Carries Much Information

Crude Production by Districts

Daily average gross crude output of United States, by fields, for week ending with dates given below, as compiled by American Petroleum Institute.

OKLAHOMA

	Nov. 14	Nov. 7
North Braman	1,850	1,900
South Braman	6,850	8,000
Blackwell	2,750	2,750
Hubbard	2,700	2,200
Thomas	17,750	16,350
Tonkawa	44,000	45,400
Garber	56,700	53,250
Burbank	48,650	48,950
Osage, outside Burbank	33,100	33,250
Watchorn	4,650	5,000
Cushing	22,850	22,800
Yale Jennings	10,800	10,700
Davenport	18,800	18,550
Bristow-Slick	31,100	31,150
North Okmulgee	18,200	18,250
Lyons-Deaner	4,550	4,550
Stroud	3,500	3,500
Cromwell	24,050	24,200
Papoose	13,650	12,800
Wewoka	8,950	9,000
Duncan district	8,050	8,050
Graham	9,100	9,150
Fox	4,150	4,150
Healdton	15,250	15,250
Hewitt	14,150	14,150
Others	60,050	58,900
Total Oklahoma	486,200	482,200
Increase		4,000

* * *

KANSAS

Florence-Covert	2,000	2,000
Peabody-Elbing	4,950	4,950
Eldorado-Towanda	14,650	14,600
Augusta-Fox-Bush	5,450	5,500
Rainbow Bend	9,350	9,350
Russell	5,050	5,400
Others	65,800	66,800
Total Kansas	107,250	108,600
Decrease		1,350

NORTH LOUISIANA

	Nov. 14	Nov. 7
Homer	6,100	6,200
Haynesville	12,000	12,100
Caddo, light	8,800	8,800
Caddo, heavy	2,600	2,350
De Soto, Red River	4,000	4,000
Elm Grove	600	700
Bellevue	2,650	2,900
Cotton Valley	9,550	9,650
Total N. Louisiana	46,300	46,700
Decrease		400

* * *

ARKANSAS

El Dorado	8,800	8,750
Smackover, light	22,050	22,600
Smackover, heavy	159,350	166,800
Stephens	1,700	1,750
Nevada	1,350	1,350
Total Arkansas	193,250	201,250
Decrease		8,000

* * *

CALIFORNIA

Santa Fe Springs	53,500	54,500
Long Beach	106,000	107,000
Huntington Beach	45,000	45,800
Torrance	33,000	34,000
Dominguez	27,500	27,500
Rosecrans	24,500	24,500
Inglewood	74,500	75,500
Midway-Sunset	100,500	100,500
Others	180,000	180,000
Total California	644,500	648,500
Decrease		4,000

* * *

SOUTHWEST TEXAS

Luling	21,800	22,200
Mirando	6,700	6,700
Somerset	2,150	2,150
Lytton Springs	9,300	9,650
Others	950	950
Total S'west Texas	40,900	41,650
Decrease		750

* * *

GULF COAST

	Nov. 14	Nov. 7
Goose Creek	11,250	11,900
Hull	12,200	14,350
Saratoga	1,200	1,200
Blue Ridge	450	400
Damon Mound	1,050	1,150
Batson	1,500	1,550
West Columbia	9,650	3,750
Humble	4,600	4,700
Pierce Junction	450	400
Sour Lake	3,700	3,750
Spindletop	1,100	1,150
Orange County	15,300	15,600
Edgerly	500	500
Evangeline	900	850
Vinton	6,550	6,550
Lockport	4,050	4,250
South Liberty	9,200	10,750
Big Creek	1,050	950
Others	850	800
Total Gulf Coast	85,550	90,550
Decrease		5,000

* * *

NORTH TEXAS

Burkburnett	12,550	12,500
Electra	13,350	13,350
Iowa Park and K-M-A	4,100	4,050
Wilbarger	13,250	12,700
Panhandle	3,200	3,700
Petrolia	400	400
Archer county	31,600	31,200
Total N. Texas	78,450	77,900
Increase		550

* * *

EAST CENTRAL TEXAS

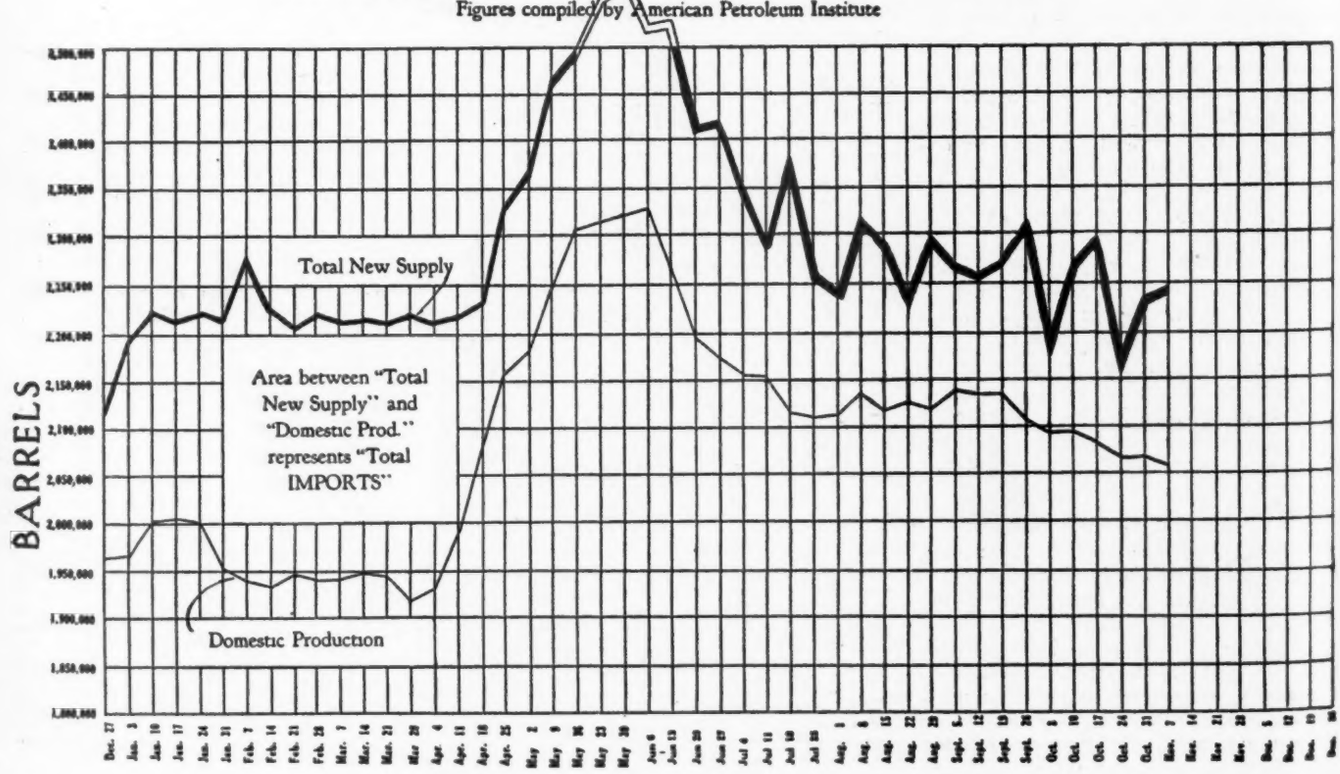
Mexia	15,250	16,850
Currie	1,200	1,350
Richland	2,700	2,705
Corsicana-Powell	37,900	38,850
Wortham	13,200	15,950
Total E. C. Texas	70,250	75,750
Decrease		5,500

WEST CENTRAL TEXAS

Stephens county	13,950	13,850
Eastland county	6,900	6,950
Desdemona	2,250	2,250

DAILY AVERAGE CRUDE OIL PRODUCTION AND IMPORTS

Figures compiled by American Petroleum Institute


BARRELS
Total New Supply
Area between "Total New Supply" and "Domestic Prod." represents "Total IMPORTS"
Domestic Production

This chart is based on official complete figures of A. P. I. and is a week later than the production estimates given in tabular form above.

Young county	7,500	7,300
Palo Pinto county	600	600
Callahan county	3,400	3,300
Shackelford county	2,500	2,550
Reagan county	30,300	30,600
Others	5,300	5,450
Total W. C. Texas	72,700	72,850
Decrease		150

* * *

ROCKY MOUNTAIN

Wyoming

	Nov. 14	Nov. 7
Salt Creek	63,950	61,650
Grass Creek	2,800	2,750
Elk Basin	750	700
Big Muddy	3,350	3,400
Lost Soldier	3,900	3,700
Rock River	2,950	3,250
Teapot Dome	1,450	1,550
Others	2,850	2,850
Total Wyoming	82,000	79,850
Increase		2,150
Montana		
Cat Creek	3,250	* 3,100
Sunburst	12,400	*12,600
Total Montana	15,650	*15,700
Decrease		50
Colorado		
Moffat (Craig)	3,650	*4,350
Fort Collins	1,600	*1,550
Florence	300	* 300
Others	300	* 300
Total Colorado	5,850	*6,500
Decrease		650
New Mexico		
Artesia	5,000	*4,500
Hogback	550	* 550
Rattlesnake	500	* 500
Total New Mexico	6,050	*5,550
Increase		500
Total Rocky Mount'n.	109,550	*107,600
Increase		1,950

*Revised

* * *

EASTERN	105,000	*104,000
Increase		1,000

*Revised.

* * *

Production Summary

Production east of Rockies	1,395,400	*1,409,050
Decrease		13,650
Production in U. S.	2,039,100	*2,057,550
Decrease		18,450

*Revised

(Continued from page 37)

operations in ordinary procedure. Six copies of the invoice are made when an order is accepted from a customer. As first placed in the typewriter on receipt of an order all essential facts are entered except the car number, seal number and notations regarding capacity of the car, temperature when loaded and net gallonage of shipment.

One copy of the invoice is mailed to the customer as an acknowledgement of shipping instructions. This saves writing a letter to the customer acknowledging the order. A second copy goes to the refinery as a car load shipping order saving a separate operation in preparing an order to the refinery. A third copy is filed.

Three copies of the invoice remain until notice comes from the refinery that shipment has been made. The accounting department then makes its calculations, forwards two copies of the invoice to the customer and retains one for a record.

In addition to saving two operations the invoice system reduces chances of error. If the original notations are wrong all copies are wrong and the customer will advise the refiner of the error when he receives his acknowledgement of shipping instructions.

Two Michigan Tests Yield Oil

(Continued from page 28)

Distillation Test of Sample of Crude Oil from No. 1 well, Saginaw Prospecting Co. Gravity of oil 42.5° A. P. I.

	Gravity
1st 5%	75.0
2nd "	67.2
3rd "	65.1
4th "	62.0
5th "	59.0
6th "	56.2
7th "	53.4
8th "	50.2
9th "	48.0
10th "	45.3
11th "	42.5
12th "	40.7
13th "	38.9
14th "	36.8
15th "	35.5
23% bottoms, gravity 22.6°.	

counties. Saginaw and Bay City are east of the center, therefore the strata in the vicinity of these places have a general westerly dip, which, on the average, is about 20 feet per mile. Since Saginaw is somewhat nearer the central basin corresponding strata at Saginaw should be deeper than at Bay City.

"Upon platting the records of the salt wells along Saginaw river the Napoleon, or Upper Marshall sandstone, instead of being deeper at Saginaw is apparently 200 to 300 feet higher than at Bay City. This sandstone rises gradually from a depth of about 900 feet in Bay City to about 610 feet in the old Wylie well near Bristol street bridge in Saginaw, and then descends to the southwest. .....Apparently this fold should run slightly west of north through Saginaw near Bristol street bridge to a point two or three miles west of Kawkawlin."

Back in 1912, a company was organized by Saginaw business men for the purpose of testing the local structure, which had been partly worked out even before the publication of the report by Dr. Smith. An article had been written some time before by Dr. A. C. Lane, then state geologist, in which this anticline had been disclosed as worked out from records of salt wells. This early company, named the Saginaw Valley Development Co., drilled 10 wells. Some of the men interested in the venture are stockholders in the present Saginaw Prospecting Co.

Two of the 10 wells were drilled to the Traverse formation, or as it is known locally, the Saginaw "sand." The other wells went to the Dundee formation, the producing horizon in the Petrolia-Oil Springs district of Ontario. There it is called the Corniferous. The same formation has produced a little lubricating oil at Port Huron, Mich.

The records of these wells is quite long and will not be set out here. The nearest of them were about one and one half miles away. The Berea yielded some gas but no oil; the Traverse yielded oil in several of the wells and one of them produced a substantial quantity although not enough to pay out on the well.

Dr. Smith says:

"It is to be regretted that more of the drill holes were not spaced along the supposed course of the anticlinal. Five of the 10 wells drilled by the Saginaw Valley Development Co. were within a radius of 1200 feet and three of the remaining five were at considerable distances from the supposed crest of the fold. In short, only about two miles of the anticline, apparently 25 or 30 miles long, has been tested and this is not sufficient to determine whether the drillings are located in a sag or on a dome, if these secondary structures exist. Since oil and gas occurs in greatest abundance in the vicinity of the domes or cross arches it is possible that, had the explorations been made along the supposed axis of the anticline, oil and gas would have been found in greater quantity."

The men back of this enterprise surely picked out a nice place for an oil field. Saginaw, a clean, wholesome city of 70,000 population, is served by the Pere Marquette, Michigan Central and Grand Trunk railways. The city paving runs to within a half mile of the first well. After leaving the paving there is, at this time, some resemblance to other oil fields and the familiar scene of a trucking contractor wondering how he will get out is sometimes enacted when material is brought in. It is likely to be somewhat cold this winter, but C. M. Clark, one of the production men who came from Bremen, has found a place where he can get heavy duty socks reaching almost to his knees, at a ridiculously low price, so the company should be able to go on getting the grease regardless of weather.

The only handicap is a dog who lives at a farmhouse near the No. 2 well. Regardless of the expert testimony of the men in the field, this correspondent insists that the dog will bite if you are not eternally watchful.

Log of No. 2 well, Saginaw Prospecting Co. SE. ¼ of NW. ¼ of 14-12N.-4E., Saginaw Co., Mich.

	From	To	Thickness
Surface	178	....	....
Black Slate	178	300	122*
Gray Sand	300	355	55
White Lime	400	450	50
Broken Up Sand	450	485	35
Blue Slate	485	614	129
Marshal Sand	614	730	116
Red Rock	730	828	98
Blue Slate	828	862	39
Red Rock	862	902	40
White Slate	902	970	68
Red Rock	970	1060	90
White Slate	1060	1230	170**
Stray Sand	1230	1265	35
Blue Slate	1265	1710	445
Red Rock	1710	1720	10
White Slate	1720	1795	75
Black Slate	1795	1825	30
Berea Grit Sand	1825	1853	28
Total Depth	1853	....	..

*Hole full of water at 230 feet.
**Water at 1095 feet.

Eastern Refiners Visit Tide Water Plant

CLEVELAND, Nov. 14.—More than 40 members of the National Petroleum Association, representing 35 refining companies, made their third refinery visit on October 28, under the auspices of the department of manufacture of the association. The plant visited was that of the Tide Water Oil Co., at Bayonne, N. J.

J. B. Edwards, superintendent of the refinery, gave an address of welcome to the visitors. The party was divided into small groups, each with a guide. Each group followed a carefully planned route which gave them a view of the crude stills, cracking stills, filter house, wax house, can and gas plant, gas recovery plant, compounding laboratory and motor laboratory.

Lunch was served in the company dining room. Late in the afternoon the visitors returned to New York by tug, where they were entertained at dinner at the Engineers' Club and later at the theatre, as the guests of several supply companies.

The companies acting as hosts and their representatives in attendance are: M. W. Kellogg Co., G. C. Hargrave; American Car & Foundry Co., E. D. H. Fowler; Johns-Manville Co., E. V. Rineheart; Power Specialty C., Harry Hope; Chicago Bridge & Iron Works, H. C. Brown; Max B. Miller Co., Max B. Miller.

B. B. Stroud, McKean County Refining Co., is the trustee of the National Petroleum Association in charge of the department of manufacture and the present councillors are: H. C. Peterson, Seneca Oil Works, Warren, Pa.; MacLean Houston, United Refining Co., Warren, Pa.; J. B. Northrup, Ohio Valley Refining Co., St. Mary's W. Va.; L. D. Fulton, Pennzoil Co., Oil City, Pa.

Among those who made the visit of inspection to the Tide Water Plant were:

J. M. Augustus, Pure Oil Co., Warren, Pa.
W. F. Bennett, Wilburne Oil Works, Warren, Pa.
S. Bevin, Tide Water Oil Co., New York.
John A. Beck, Pennsylvania Refg. Co., Karns City, Pa.
Walter A. Beck, Pennsylvania Oil Co., Karns City, Pa.
H. A. Borst, Tide Water Oil Co., New York.
B. B. Browne, Great Western Oil Co.
H. F. Cogswell, Superior Oil Works, Warren, Pa.
G. C. Davison, Tri State Refg. Co., Kenova, W. Va.
H. C. Eaton, Valvoline Oil Co., Butler, Pa.
F. A Epps, Tide Water Oil Co., New York.
A. T. Eaton, Mutual Refg. Co., Warren, Pa.
L. D. Fulton, Pennzoil Company, Oil City, Pa.
J. W. Fawcett, Crystal Oil Works, Oil City, Pa.
J. Griswold, Crew Levick Co., Philadelphia, Pa.
C. A. Hefren, Lucinda Refining Co., Lucinda, Pa.
Louis Hodcus, Canfield Oil Co., Coroapolis, Pa.
G. W. Hutchison, Pure Oil Company, Charleston, W. Va.
D. E. Hoffman, Tide Water Oil, New York.
T. C. Hawkey, Tidioute Refining Co., Tidioute, Pa.
Geo. F. Henry, Wilburne Refinery, Warren, Pa.
H. C. Peterson, Seneca Oil Works, Warren, Pa.
H. C. Jamieson, Warren Refinery Co., Warren, Pa.
O. P. Keeney, Tide Water Oil Co., New York.
E. M. Lyons, Tiona Refining Co., Clarendon, Pa.
H. M. Lyons, Empire Refinery.
A. W. Lackman, Emery Mfg. Co., Bradford, Pa.
Chas. McLean, Canfield Oil Co.
Frank J. McGraw, Oil Creek Rfg. Co., Titusville, Pa.
Houston McLean, United Refining Co., Warren Pa.
A. Mullhaupt, Jr., Kendall Refining Co., Bradford, Pa.
H. E. Michener, Sun Oil Company, Marcus Hook, Pa.
S. L. Milliff, Canfield Oil Co., Coroapolis, Pa.
J. B. Northrop, Ohio Valley Refining Co., St. Mary's, W. Va.
H. S. Pitman, Seneca Oil Works, Warren, Pa.
L. C. Quackenbush, Tide Water Oil, New York.
W. R. Reck, Bradford Oil Refg. Co., Bradford, Pa.
J. H. Rose, Bradford Oil Refg. Co., Bradford, Pa.
T. J. Skidmore, Tide Water Oil Co., New York.
B. B. Stroud, McKean County Refg. Co., Bradford, Pa.
Mr. Sullivan, Pure Oil Co., Warren, Pa.
A. W. Scott, Empire Oil Works, Oil City, Pa.
D. P. Sturgess, Cities Service Refg. Co., Boston, Mass.
Henry Thomas, Sun Oil Co., Marcus Hook, Pa.
J. B. Turk, American Oil Works Co., Titusville, Pa.
P. S. Tarbox, Independent Refg. Co., Oil City, Pa.
H. W. Walchli, Tiona Refining Co., Clarendon, Pa.
R. G. Williamson, Warr-Penn Refining Co., Warren, Pa.
W. S. Zehring, The Pennzoil Co., Oil City, Pa.
R. T. Zook, Sloan & Zook Co., Bradford. Pa.

CANTON, MISS.—J. A. Kinkead will celebrate his first anniversary on Dec. 1 as a service station proprietor here. His monthly gasoline sales have averaged 12,000 gallons and motor oil, 842 gallons, in a town of 5000 population, and competition from five other stations.

Coming Meetings

Indiana Independent Petroleum Marketers Association, Indianapolis, Dec. 9.

American Mining Congress, Washington, D. C., Dec. 9, 10, 11.

American Petroleum Institute, Hotel Biltmore, Los Angeles, Jan. 19, 20, 21.

Michigan Independent Oil Men's Association, Detroit Mich., Jan. 21, 22.

Western Petroleum Refiners Association, Texas Hotel, Fort Worth, Tex., March 2, 3, 4.

Early Arrivals Promise Record Attendance

LOUISVILLE, KY., Nov. 16.—Secretaries of state jobbers' associations and directors of the National Petroleum Marketers Association held conferences today in preparation for opening tomorrow of the annual convention of the national association when market price structures will be discussed.

Exhibits were in place tonight at Jefferson County armory and arrivals of scores of oil men on every train indicated that attendance will rival that at Cleveland a year ago which broke all records.

South Dakota Officials Appeal Gasoline Suit

PIERRE, S. D., Nov. 17.—A motion for rehearing of White Eagle Oil & Refining Co's suit against Gov. Gunderson, the members of the state highway commission, state treasurer, auditor and attorney general, has been filed by Attorney General Buell F. Jones, on the ground that the supreme court failed to note that section 8, article 11, of the state constitution applies to general taxes and not to gasoline tax in deciding that the state gasoline business was unconstitutional because the enabling law diverted gasoline tax receipts from their lawful purpose.

Section 8 was quoted in the Nov. 11 issue of National Petroleum News, page 28.

Once Great Spindletop Makes Come-back

HOUSTON, Nov. 16.—A 1600 barrel well that marks the discovery of lateral sand production offside the Spindletop salt dome to the south comes upon the petroleum horizon nearly 25 years after that field exerted its flush influence at caprock levels.

The current discovery was made by the Yount-Lee Oil Co., of Beaumont, in its No. 1 McFadden, which at 2750 feet began flowing 1600 to 1800 barrels of 28 gravity oil. Caprock production at Spindletop, which included the famous Lucas discovery, came from approximately the 1000-foot level.

The re-discovery at Spindletop may prove important for production at levels down the flanks of the salt dome which influences the oil accumulation. But the "come back" promises no flush influence of the character that originally marked the field. Then overproduction resulted and oil sold as low as three cents a barrel. Now relatively slow development of flank production will exert no broad economic influence but may prove highly profitable to individual operators, similarly as other offside developments are carried forward on Gulf Coastal salt domes.

Garber Deep Wells Hit New High Figure In Spite of Water Troubles

By A. F. Hinton
N. P. N. Staff Writer

TULSA, Nov. 14.

IN spite of the appearance of water in some of Garber's largest wells last week, the field's production from the deep horizons has continued to increase. The water has gained somewhat in some of the wells but it has been checked in others, so that the situation does not appear so serious at the moment as it did a week ago. The highest output yet attained by the deep sand wells was recorded yesterday, when 25 wells produced 56,515 barrels, with 6600 barrels of water.

Several new wells were added the past week, although some of them do not yet show as completions as they are still drilling into the sand, but producing large quantities of oil.

The Mid-Continent Petroleum Corp.-Marland Oil Co. joint lease in the SE of 13-22-4W was boosted in output by two big wells drilled in in the past few days, and now has three wells making 19,200 barrels, not including four smaller wells making around 800 barrels. These companies' No. 53 School Land, in the SEc NE SE of 13, was flowing 7430 barrels daily at last reports, from total depth of 4290 feet. Their No. 54, in the NEc of the lease, a west offset to the Roxana Petroleum Corp. No. 5-W Schroeder, a 10,000-barrel well, has been drilled to 4319 feet and made 4500 barrels the past 24 hours.

One of the most famous wells on this lease, No. 45, in the NEc SE SE of 13, showed water for the first time late in the past week, and dropped off 500 barrels in production the first day after the water appeared. This well made 7544 barrels on Nov. 12, and on the 13th made 7000 barrels, with 300 barrels of water. It is a west offset to the Roxana's No. 2-W Schroeder, which is still making 8200 barrels daily after having made a wonderful record by staying up over 10,000 barrels daily for 60 days.

Try Air to Stimulate Well

Another well on this lease, No. 41, in the southeast corner of the 160 acres, which was the second deep sand well in the field and a north offset to the Sinclair-Belveal discovery, is now dead, having been drowned out by water. This well had initial production of 8500 barrels, but went down rapidly when water encroached and made several thousand barrels of water to only a small amount of oil before it stopped producing altogether. An air compressor similar to that being used by the Wentz Oil Corp. in Tonkawa was tried on this well in the hope of reviving it, but it flowed only water, according to reports, and the experiment has been abandoned for the time being on account of the problematical effect of this air on surrounding wells.

Another recent deep sand well is the Sinclair Oil & Gas Co. No. 23 North Walker, in the SEc NE of 13-22-4W, a north offset to the Mid-Continent-Marland No. 54. The Sinclair well made 4611 barrels during the last 24 hours at total depth of 4328 feet. None of the three big wells around this section quarter-corner has yet started making any water. On this lease, Sinclair drilled its No. 25 into the sand this week, but so far has failed to make much of a well of it. It got the top of the Siliceous lime at 4390 feet, had a hole full of oil at 4407 feet and has been drilled to 4409 feet, where it swabbed 200 barrels the last 24 hours. Apparently it has considerable oil, but no gas, and will not flow. It is located in the SEc SW NE of 13, and is the second location west of No. 23.

Water Encroachment

The Roxana's No. 2-W Schroeder, in the NWc SW SW of 18-22-3W, which was reported last week as showing a trace of water, has not made any water at all the past week, and has made 8200 barrels of good oil daily for the past three days. This is certainly a most remarkable well. The same company's No. 3-W on this farm, one location east of the SWc of the section, is now making 1000 barrels of water daily, as compared with 600 barrels of the pernicious fluid Nov. 9, when it first made its appearance in this well. The oil production, however, has not been very seriously affected, as the well is still making 6100 barrels, as compared with 7050 barrels a week ago.

The Roxana's No. 4-W is a new well now drilling into the sand, and should be in within a day or two. It had a showing of oil and gas at 4125 feet and was drilling ahead at 4145 feet at last reports. This well is in the SWc NW SW of 18, and will complete the row of four deep sand wells along the west line of the famouse Schroeder lease. The Roxana No. 5-W, in the NWc of the farm, has not made any water, but has been declining somewhat for the past three days. Its production was 10,584 barrels on Nov. 11, 10,322 barrels, Nov. 12, and 9696 barrels on the 13th. The No. 1-W, in the SWc of the lease, has been affected more by the water encroachment than any of the other Roxana wells, and is now just making an even break, with 2000 barrels of oil daily and the same amount of water. This well was making 5500 barrels of oil when water first appeared Nov. 8, so it had gone off 3500 barrels in six days.

Another Well at Seay

In the Seay pool, Jefferson county, down near the banks of the Red river, the Gypsy Oil Co. drilled in its second well in the deep sand, and got a much smaller well than the first one. The

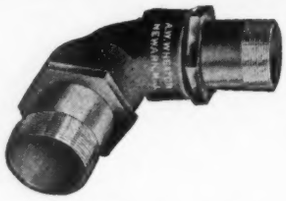
Bulletin

Fast Wire Service

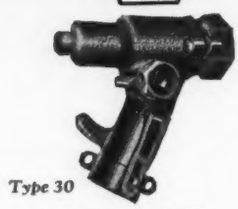
TULSA, Nov. 16.—In the Garber field the Sinclair Oil & Gas Co. has the largest well yet drilled into the deep sand in its No. 19 Hartley, in the SW corner NW of 18-22-3. This well hit the big pay Sunday at 3 p. m., and made 10,305 barrels up to seven this morning. It is estimated good for 16,000 barrels.

This well got the top of the lime at 4200 feet, first oil at 4202, was flowing 200 barrels an hour at 4220 feet and got the big pay at 4222. It is a north offset to Roxana No. 5-W Schroeder, which is making about 9600 barrels daily and is the first deep sand production on the Hartley lease.

Mid-Continent-Marland No. 45 School, in the NE corner SE of SE Sec. 13, which has been making 7000 barrels of oil and 300 barrels of water daily went dead Nov. 15. It started flowing again today and made 1000 barrels of oil and 300 barrels of water and again went dead. The two most recent wells on this lease, Nos. 53 and 54, are making one-tenth per cent of water each, but producing 12,700 barrels of oil together.



Double Swing Joint



Type 30
Tank Truck Faucet

Single Swing Joint

Type A
Tank Truck Faucet

Type 26
Loading Valve

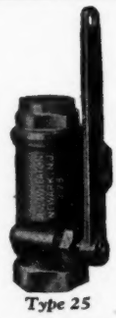
Type 24
Tank Truck Faucet

They're Money-Savers
—*every one*

Here are a few Wheaton Products —money savers, every one. That's what users of Wheaton Faucets, Valves, Nozzles, Joints, etc., have learned about these and every other article bearing the name Wheaton. And the reason is simple—it's the *quality* that is built into them. Ask any man who is qualified by knowledge of equipment and he will tell you that Wheaton Products are known throughout the entire oil industry as the *Quality Products* of their field. And, if their first cost is higher than that of other makes—which is seldom the case —Wheaton Products make up the difference many, many times by their long life of economical service. Send for catalog today.

A. W. WHEATON BRASS WORKS, NEWARK, N. J.

Type B
Tank Truck Faucet



Type 25
Loading Valve

Type 35 Non-Drip
Lubricating Faucet

Wheaton

Completions in Oklahoma and Kansas, Week Ended Nov. 14

OKLAHOMA

Carter County

Company	Well	Location	Depth	Initial Production
Magnolia	1	C NW NW SE 19-1-3W	3155–3200	15
Magnolia	8	C NE SW SW 24-2-3W	2036–2058	4M
Magnolia	10	C SE NW SW 24-2-3W	2138–2240	210
Atlantic	3	C NE NE SW 25-2-3W	3182–3338	20
Wirt-Franklin	4	C SW SE SW 5-3-2W	2285–2969	20
Humble	1	C NE SE NW 8-3-2W	3205–3222	47
Amerada	18	SWc SE NE 28-5-1E	1016–1032	160
Wirt-Franklin	2	C SE SE NE 22-2-3W	T.D.3214	Dry
Atlantic	2	C SW SW NW 5-3-2W	T.D.2879	Dry
Simpson-Fell	3-A	NWc SW NW 10-4-2W	T.D.3108	Dry

Creek County

W. Phillips	1	SWc NE SE 27-17-8	3160–3163	175
Magnolia	3	NWc NE SW 5-16-8	3115–3136	60
Schooley et al	1-A	C NE SW 10-18-10	2450–2465	30
Gypsy	13	C W½SW NE NW 6-18-12	2100–2106	25
Wright	7	SEc NE SW 24-17-10	1805–1845	45
Buckholtz	1	NEc SE 32-16-9	2569–2590	25
Prairie	5	C SW NW SW 22-17-9	2460–2478	20
Texas	1	NWc SE 5-19-8	T.D.3409	Dry
Pure	2	NWc SW NW 19-17-9	T.D.3500 OWD	Dry
Nowata	1	SWc SE NW 14-15-9	T.D.3035	Dry

Garfield County—Garber

Roxana	3	C SE SW SW 18-22-3	4270–4312	4310
Roxana	5	C NW NW SW 18-22-3	4275–4318	4480
Sinclair	9	NWc NE SW SE 18-22-3	2256–2305	1

Garvin County

Goldenline	1	C NE SE 13-2-3	T.D.1175	Dry

Grant County

Blackwell	2	NW NE NW 23-27-3W	4039–4047	20M

Hughes County—Papoose

W. Phillips	1	C NW NE SE 1-9-9E	2140–2172	120

Hughes County

Mid-Kans	2	C NE SW NE 4-9-11E	2910–2920	40
Ramsey	1	NWc NE SE 19-8-10	2060–2095 OWD	1.1M

Jefferson County

Pace et al	1	SEc NW NW 22-3-9W	T.D.2700	Dry

Kay County

Twin State	1	C SE NE NW 31-27-2E	2252–2262	77

Kay County—Tonkawa

Texas	13	NWc SW 27-25-1W	4255–4270	168

Kay County—Hubbard

Prairie	7	SWc SE 1-26-2W	2938–2980	15

Lincoln County—Davenport

Carter	1	SEc 6-15-6	4028–4037	860
Indep	1	SEc NE SE 6-15-6	4298–4304	70
Texas	6	NWc SE SW 2-14-5	3290–3386	1095
Twin State	5	SWc NE NW 2-14-5	3280–3374	430
Selby-SW	8	SWc NE SE 3-15-4	3339–3417	280

Muskogee County

Blakely	1	SEc SW NE 4-13-16	T.D.2227	Dry
Probst	3	CSL SE NW 19-14-16	T.D.1735	Dry

Okfuskee County

Newman	1	C SW SE NW 2-10-12	3398–3413	19M
Kline-Brann	2	CSL SW SE 4-12-11	T.D.3541 OWD	Dry
Phillips	4	NWc SE NE 24-11-11	T.D.2825 OWD	Dry
Tidal Osage	1	C SW SW SW 34-10-11	T.D.3152	Dry

Okmulgee County

Pulaski	6	NEc NW NW 1-11-13	2830–2843	245
Holmes et al	1	NWc SE NE 22-16-13	T.D.2160	Dry
Transcontinental	4	NEc 9-15-11	T.D.2252	Dry
Denton-Marshall	1	NEc SE 15-15-12	T.D.2618	Dry
Sheldon-Houston	1	SWc NW SW 17-14-11	T.D.3071	Dry
W. Phillips	2	NWc NE 6-14-12	T.D.3152 OWD	Dry

Osage County

I. T. I. O.	1	SEc NE 3-28-11	870– 917	5
Wrightsman et al	5	SEc NW NE SW 19-25-8E	2460–2712	65
Devonian	14	NWc SE SW 34-25-11	1675–1697	40
Continental	5	SWc SE SW NE 32-24-8E	2380–2415 OWD	46
Owen Osage	351	SEc SW 7-23-11	1325–1363	1M
Tidal Osage	22	CEL NW 33-22-10	1906–1937	12

Company	Well	Location	Depth	Initial Production
Knupp et al	1	NWc NE 28-22-12	T.D.1954	25
Devonian	1	NEc 25-21-9	2165–2179	25, 6M
Selby	14	C NE SW NW 15-21-12	1389–1414	6
Kewanee	6	SWc 19-21-12E	1665–1698	45
Eliott-Smith	21	SWc SE SW NW 30-21-12	1636–1638	50
Rivick	1	SWc NW 33-29-9E	T.D.2170	Dry
Winona	1	SWc NE 17-29-11	T.D.1127	Dry
Winona	1	C NW 21-29-11	T.D.1030	Dry
Owen Osage	350	CWL NE 36-28-10	T.D.1892	Dry
Petroleum Drlg	13	SEc NE SE NW 4-25-9E	T.D.2700	Dry
Robinson et al	5	SWc NE NW 1-25-11	T.D.2184	Dry
Owen Osage	346	SEc NE SE SW 29-24-12E	T.D.1840	Dry
Redecker	1	NWc SW NW NW 2-22-9E	T.D.2470	Dry
Devonian	3	SEc SW SE NE 10-21-10	T.D.2515	Dry
Sand Springs Home	88	SWc NE 19-21-10	T.D.2796	Dry

Pawnee County

Noble	2	SEc SW SE 9-20-7E	2928–2955	14

Payne County

Texas	1	NWc NE NE 17-19-5E	2968–2981	45

Pontotoc County

Amer. O. & R	1	SWc NW SW SE 9-4-6E	T.D.3180	Dry
T. P. C. & O	2	NWc SW NW 34-5-6E	T.D.1845	Dry

Pottawatomie County

Gwinnup et al	1	SWc SE 13-11-3E	T.D.3655	Dry

Seminole County

Slick	1	C NW NW SW 14-8-7E	3182–3204	130

Stephens County

Magnolia	16	SWc SE SE SW 34-1-5W	2199–2215	40
Commercial	1	NWc SE SE 12-2-8W	1508–1532	50
Western	1	NEc NE SE SW 32-10-8W	T.D.2302	Dry

Tulsa County

S. S. Home	1	SEc SW SW 3-19-11E	T.D.2123	Dry
S. S. Home	1	C NW SW 13-19-11	T.D.2215	Dry
Cate	5	CWL SW NW 29-19-11	T.D.2135 OWD	Dry
Green et al	1	SEc 2-17-14E	T.D.2156	Dry
Dickerson	2	SEc NE 11-16-13	T.D.2337 OWD	Dry

KANSAS

Butler County

Brennen-Wiman	1	SEc NW SW 27-26-7E	2103–2163	105
Magnolia	1	SWc 25-27-4E	2594–2622	25
Mid-Kansas	1	NEc 30-24-8E	T.D.2698	Dry

Chase County

W. Phillips	1	SWc NE SW 36-22-9E	T.D.2540	Dry
Mid-Kans	1	NWc SW SW 36-22-9E	2477–2486	20

Chautauqua County

Slick	3	NWc SW NW 10-34-9E	1668–1683	10
Brouck et al	1	SEc 16-34-9	1809–1823	5

Cowley County

Duffield et al	1	NWc SW SW 19-32-5E	693– 704	½M
Miller-Hershey	1	NEc 33-30-7	T.D.3135	Dry

Cowley County—Rainbow Bend

W. Phillips-Marland	10	NWc 21-33-3E	3192–3220	440

Elk County

Coneley et al	4	C E½ SW 3-30-9E	1038–1049	90
Gillespie	3	SWc SE SE 22-31-10	1332–1342	15

Greenwood County

Titus et al	5	SWc NW 29-22-10	2395–2442	150
Titus et al	16	NEc NW NE NW 29-22-10	2264–2327	150
Empire	7	NEc SE SE 11-22-11	1710–1743	550
Empire	8	NWc NE SE 11-22-11	1805–1860	185
Robertson et al	7	SWc NE 25-23-13	2518–2567	300
Davis et al	1	NWc 22-23-9	2277–2284	40
McGinnis et al	2	NWc SE 30-24-11	1553–1568	20
Mid-Kansas	5	NEc SE NW NW 20-25-9	2360–2426	40
Theta	13	CNL NE NE 17-22-10	T.D.2356	Dry
Ritchey-Moore	1	NWc 9-22-11	T.D.2140	Dry
Empire	1	NEc SE SW 15-22-11	T.D.2175	Dry
Braden et al	4	NEc NW NE 34-22-13	T.D.1925	Dry

Lyons County

Loy-Chaney	1	SWc 16-21-10	T.D.2362	Dry

Marion County

Miss. Valley	1	SWc NW 15-20-5E	2100–2120	8M

new well is No. 2 Arpelar, located in the center of the south line of the SE NE of 33-6S-5W, a location west of the No. 1, which came in several weeks ago with initial production of 4002 barrels. The best No. 2 has been able to do so far is to flow at the rate of 23 barrels an hour, which was its production at last reports. It got the sand at 1525 feet and has been drilled five feet in. It is apparently considerably lower on structure than No. 1, as that well topped the sand at 1458 feet. No. 2 was an old well drilled deeper, having been completed for a producer some time ago in the 110-foot sand. The 4000-barrel well is now down to 800 barrels daily and is making some water. Prairie Oil & Gas Co. No. 5 Seay, in the CNL NW SW of 34, also an old well drilled deeper, was drilling at 1510 feet at last reports, with nothing showing.

Wells Completed

In Oklahoma, during the week just closed, 84 wells were completed, of which 42 were oil wells, five were gas wells, and 37 were dry holes. This compares with last week's total of 85 completions, divided 38 oil wells, five gas wells, and 42 dry holes.

The 42 oil wells included in this week's report had a total initial production of 13,641 barrels, giving them an average initial of 324.8 barrels per well. Last week, 38 wells brought in 11,305 barrels of new production, with a per-well average of 297.5 barrels.

Completions reported from Kansas this week totaled 26, of which 16 were oil wells, two were gas wells, and eight were dry holes. Last week there were 38 Kansas completions, divided 25 oil wells, two gas wells, and 11 dry holes. The 16 oil wells in this week's report had total initial output of 2145 barrels, or 134.3 barrels per well average. Last week 25 Kansas oil wells accounted for 4281 barrels of new production, with a per-well average of 171.3 barrels.

Completions in North Louisiana and Arkansas, Week Ended Nov. 12

LOUISIANA

Company	Well	Location	Depth	Yield
Union Parish				
R. W. Rhodes	W. M. Jones No. 1	6–23–2W	2727	dry aband.
Gulf Refining Co.	Frost Lbr. Industries No.1	33–23–1W	2425	s.w. aband.
Caddo Parish—Vivian				
Austin Oil Co.	Hoss No. 25	24–22–15	1060	25
Dixie Oil Co. (Standard of Indiana)	Worley No. 1	23–22–15	1080	10
Shawmut Pet. Co.	Jolly No. 3	22–22–15	1005	15
Caddo Parish—Blanchard				
Ark. Caddo Oil Co.	Nickerson No. 1	30–19–15	2600	dry aband.
Claiborne Parish—Homer				
Gulf Refining Co.	George West No. 1	19–21– 7	1328	15
Ouachita Parish				
Nat. Gas & Pet. Co.	School Board No. 1	16–21–4E	2130	20m. ft.gas
Carson Carbon Co.	Woodley No. 1	4–19–5E	2235	5m. ft.gas

TEXAS

Company	Well	Location	Depth	Yield
Waskom—Harrison County				
Panola O. & G. Co.	Moore No. 1	Bedford HRS	1925	10m.ft.gas

ARKANSAS

Company	Well	Location	Depth	Yield
El Dorado (East Field)				
J. W. Clark	Tufts No. 1	7–17–14	2872	s.w.aband.
Nat. Gas & Pet. Co.	Tufts No. 1	18–17–14	2910	s.w.aband.
Stephens				
Steele et al.	Howell & Calloway No. 1	5–14–20	1250	dry aband.
Smackover				
Lion O. & R. Co.	Forrest City Box Co. No.1	25–15–15	3602	dry aband.
Ohio Oil Co.	Arnold No. 4	26–15–16	2090	30
Imperial O. & G. Co.	McClannahan No. 12	6–16–15	2390	500
Lion O. & R. Co.	Murphy A-11	7–16–15	2390	150
Lion O. & R. Co.	Murphy G-1	8–16–15	2485	junked abd.
Nat. Gas & Pet. Co.	Harrell B-4	17–16–15	2645	600
Ohio Oil Co.	Murphy No. 1	24–17–15	2932	s.w.aband.
Thurman et al.	Wilson No. 6	6–16–15	2560	400

Completions in North and Central Texas, Week Ended Nov. 14

Company	Well Farm	Location-Sur.	Depth	Initial Prod.
Archer County				
Norwood et al.	2-Rutty	O'Reilly	880– 901	35
Pace-Hoosier	2-Miller	ATNC 21	902– 909	30
Dale	16-Wilson	SP 4	1399–1401	10
Staley-Wynn	1-Wilson	ATNC 85	1509–1518	75
Staley-Wynn	2-Wilson	ATNC 88	1524–1529	125
Waite Phillips	34-Wilson	Harritis	1521–1523	150
Waite Phillips	35-Wilson	BBB&C	1515–1524	75
Maxson	2-Wilson	ATNC 75	1414–1418	60
Texhoma	1-Oldham	Hubble	1335–1340	100
Terminal	2-Falls Co.	Falls Co. Sec. 62	1181–1198	12
Trio	4-Brom	TEL 1582	1374–1400	800
Texas	12-Hill	TEL 2408	1361–1383	110
Maer-Stanforth	1-Mankins	SP 2	T.D.1851	Dry
Clair-Camp	1-Thompson	ATNC 21	T.D.1627	Dry
Texhoma	1-Parrish	Geraldine	T.D.1600	Dry
Consol-Texhoma	3-Neatherton	ATNC 95	T.D.1601	Dry
Waite Phillips	1-Tuberville	Harris 124	T.D.1865	Dry
Texas	1-Blewitt	SP 2	T.D.1701	Dry
Jones et al.	2-Darelick	TEL 1582	T.D.1516	Dry
Lyons	1-Hausler	Sanderford	T.D.1220	Dry
Bridwell-Mayfield	3-Boren	Newman	T.D.1087	Dry
Callahan County				
Albritton et al.	1-Cent. Ad.	Anderson	1433–1445	35
Albritton et al.	1-Cent. Ad.	Anderson	1433–1444	35
Crannll-Reynolds	1-Cent. Ad.	Anderson	1435–1441	100
Lowe et al.	1-Cent. Ad.	Anderson	1422–1432	25
Jones et al.	1-Cent. Ad.	Knight	1420–1430	200
Rupert et al.	1-Breeding	Carper	T.D.1609	Dry
Eastland County				
Corzelius et al.	2-Waggoner	Rahms	3335–3360	70
Mitchell County				
California	2-Butler	TP 23	T.D.3090	17
Montague County				
Humphreys	1-Hynd	Wall	949– 951	85
Navarro County				
Humble	31-Davis	Barry	1552–1628	18
Palo Pinto County				
Tex-Pac	149-Stewart	TP 71	T.D.1695	Dry
Reagan County				
Marland	1-Wilson	CGND 1119	T.D.3502	Dry
Texon	4-Univ.	Univ. 26	T.D.3010	Dry
Simon	1-Univ.	Univ. 508	T.D.3125	Dry
Big Lake	43-Univ.	Univ. 1	2900–2920	190
Big Lake	44-Univ.	Univ. 1	T.D.2927	720
Big Lake	46-Univ.	Univ. 1	T.D.3021	780
Texon	24-Univ.	Univ. 36	T.S.2926	250
Texon	27-Univ.	Univ. 36	2906–2954	1190
Texon	29-Univ.	Univ. 36	2958–2970	175
Shackelford County				
Loggie et al.	5-Black	TEL 396	328 –347	5
Hayes et al.	3-Leschber	TEL 545	437– 445	8
Phillips	2-Compton	BAL 49	2340–3350	3½M
Stephens County				
Quakins	11-Harmon	TP 51	2002–2025	55
Swensondale	31-Swenson	OAL 3	1800–1815	30
Cosby	1-Satterwhite	Price	3363–3375	1½M
Gardner et al.	1-Cunningham	TEL 1210	3156–3170	300
Thompson	1-Langford	TP 65	T.D.2276	Dry
Taylor County				
Sanger	1-Hollingshead	LAL 37	T.D.3500	Dry
Throckmorton County				
Hoffer	1-Reynolds	BBB&C 195	T.D.1803	Dry
Associated	2-Reynolds	COR 22	T.D. 925	Dry
Associated	5-Reynolds	CIR 47	519 –530	5
Upton County				
Republic	1-Baker	Univ. 8	2117–2160	50
Wichita County				
Hamon-Garrett	1-Waggoner	BS&F 11	1236–1247	20
Hamon-Garrett	1-Waggoner	BS&F 11	1746–1749	29
Hamon-Garrett	2-Waggoner	BS&F 11	1753–1761	27
Hammond et al.	2-Waggoner	BS&F 11	T.D.1755	Dry
Wilbarger County				
Hoffer et al.	1-Waggoner	H&TC 12	T.D.2800	Dry
Humble	3-Waggoner	H&TC 50	T.D.1354	Dry
Young County				
Texhoma	2-Campbell	TEL 1483	896– 903	200
Roamer	3-Dunnagan	TEL 170	1004–1009	40
Siasta	3-Dashe	Holeman	T.D.1340	Dry
Humble	1-Campbell	TEL 236	T.D.1052	Dry

GARBER PRODUCTION

Mid-Continent-Marland

Well No. & Lease	Oil Prod.	Water
41, School	Off	Off
42, School	150	15
43, School	258	15
44, School	100	25
45, School	7,000	300
47, School	300	45
53, School	7,431	...
54, School	4,500	...
Total	19,739	
Healdton Oil & Gas Co.		
29, Belveal	66	...
Roxana Petroleum Corp.		
1-W, Schroeder	2,000	1,500
2-W, Schroeder	7,200	...
3-W, Schroeder	6,100	800
5-W, Schroeder	9,696	...
1-W, Wolfe	350	225
Total	25,346	
Sinclair Oil & Gas Co.		
25, Belveal	235	500
26, Belveal	133	180
27, Belveal	...	...
29, Belveal	900	...
30, Belveal	146	...
25, Denker	60	...
26, Denker	112	400
20, W. Kisner	110	600
21, W. Kisner	2,000	500
22, W. Kisner	1,500	500
20, N. Walker	512	308
23, N. Walker	4,611	...
Total	10,319	

Total for field 55,470,26 wells

Drilling Operations in Oklahoma, Kansas and N. Texas

	Nov. 14 Loc.	Rigs	Drg.	S.D.	Total	Week Ending Nov. 7 Loc.	Rigs	Drg.	S.D.	Total
OKLAHOMA										
Burbank	2	6	5	1	14	...	4	3	1	8
Other Osage	3	9	35	13	60	2	8	51	12	73
Bristow-Cushing	22	36	141	27	226	24	39	139	21	223
North Oklahoma	9	28	140	114	291	11	17	141	117	286
South Oklahoma	12	18	141	64	235	11	22	137	67	237
Muskogee	...	12	50	11	73	...	11	47	13	71
Okmulgee-Bristow	3	52	120	42	217	4	49	124	40	217
Tonkawa	1	1	10	2	14	...	1	11	2	14
Wewoka-Cromwell	8	7	91	21	127	7	12	96	15	130
Total Oklahoma	60	169	738	295	1257	59	163	749	288	1259
KANSAS	52	75	211	130	468	48	79	225	128	480
NORTH TEXAS										
Eastland County	...	3	54	3	60	...	4	52	9	65
Stephens County	...	17	32	14	63	...	17	31	19	67
Texas Panhandle	...	19	28	14	61	...	19	28	14	61
Mexia District	...	4	12	8	24	...	6	11	8	25
E. Texas Wildcats	...	7	6	23	36	...	7	6	22	35
W. Texas Wildcats	...	21	152	62	235	...	22	120	67	209
Wichita Falls	...	55	136	36	227	...	40	146	37	223
Total North Texas	...	126	420	160	706	...	115	394	176	685
GRAND TOTAL	112	370	1364	585	2431	107	357	1368	592	2424

Unwarranted Conclusions Based On Conservative Technical Report

By Paul Wagner
N. P. N. Staff Writer

IT is regrettable that the supply and demand report of the Committee of Eleven of the American Petroleum Institute did not include the basis of computation for the setting-up of the estimates of future petroleum reserves in this country which might properly have been included as explanatory data. The inclusion in the report of this background of information was originally intended, but the plan was abandoned for the sake of brevity.

This data might very well have forestalled some of the criticism leveled at the technical men in connection with attacks already being made on conclusions set forth in the Supply and Demand report. The technical man is already coming in for some criticism because of that part of the set-up which deals with oil "recoverable at a price."

Responsibility of Technical Men

With regard to this crude supply to come from drilled wells, technical men were responsible for pages 39 to 115, inclusive, of the Supply and Demand report and they were not responsible for the conclusions appearing in part 1 of the report. The supply section for which they were responsible, i. e., part 2, does set up vast acreage, about 57 per cent of the total area of the United States as possibly oil bearing but with the explicit statement on page 52 of the report that:

"It would be a mistake, of course, to assume that all of the area designated as favorable for the discovery of new fields is to produce oil, and such an assumption is in nowise to be inferred from this discussion. The known requisites for oil fields are such that even in the most favorable territory only a very small proportion of the entire area yields production. Adequate source beds must be brought into close juxtaposition with appropriate reservoir rocks, and the combination of source and reservoir must acquire a special structural relationship before accumulation of petroleum can be effected. Only a very small per cent of the total area will become producing territory, or contribute to our supply of crude oil. But at intervals, widely spaced, perhaps, over the entire possible area, new fields may be found."

Within the area embraced by the foregoing statement, which totals 1,105,454,459 acres, not a single barrel of future production has been definitely set up by the technical men as being forthcoming. They may be correctly considered to feel certain there will be actual production from new fields within the area described, but they have carefully avoided "guessing" in that regard. Reference to this vast territory as a "Billion Acre Reserve" on page 11 (part 1) of the Supply and Demand report must be credited to others than the technical men themselves.

As regards proved undeveloped acreage and the barrelage yields set up for it, analysis shows that the figures appear more conservative when approached on the basis per acre yields in barrels than otherwise. The technical men are entirely responsible for this work, the general sub-committee accepting the district sub-committee reports as submitted by the various sub-chairmen.

With the exception of Colorado, Wyoming, California, Louisiana and Arkansas, no large per acre undrilled reserves are set up. Louisiana and Arkansas are credited with ultimate yields of 5000 barrels per acre from 5670 and 4230 acres, respectively; Colorado is credited with 14,266 barrels per acre from 3241 acres; California with 14,738 barrels per acre from 63,303 acres; and Wyoming with 21,428 barrels per acre from 7363 acres. All other states are credited with total yields of 1000 barrels per acre, or less, for their proved but undeveloped lands.

Based on Small Wells

The Kansas and Oklahoma estimates, comprising ultimate yields of 453 and 468 barrels per acre, respectively, are based on the drilling up of small well territory known to be capable of some kind of production.

The barrels recoverable under present market conditions and the barrels recoverable "at some price" are shown in columns 4 and 5 of the table on page 59 of the Supply and Demand report. Reduced to per acre ultimate yields, the Kansas reserve amounts to 453 barrels per acre from a total of 175,700 acres if we deal only with oil recoverable under present operating and market conditions, whereas the inclusion of barrels recoverable "at some price" brings the final production estimates up to 1104 barrels per acre.

As regards Oklahoma, the ultimate yield set up under present conditions calls for the recovery of 468 barrels per acre from 264,000 acres, or 1768 barrels per acre "at some price."

With regard to Texas there is no set up of ultimate yields to come from this type of small wells under present conditions in the industry. Barrels recoverable "at some price," however, total 500 barrels per acre, final production, from 423,000 acres.

It is possible to say, as relates to the Texas figures, that enough small and currently unprofitable wells have been drilled in structural areas to prove the territory considered for 3 to 5 barrels, initial production, wells that have never been exploited. "At a price," these could be profitably exploited even at considerable drilling depths.

Methods Employed in Texas

The statement is pertinent at this stage of the discussion that the technical men engaged in the Texas work subtracted 160 acres for each and every dry hole in the territory where parts of the structures were considered "morally certain to produce" under conditions hereinabove set forth.

Although the writer cannot speak with the same authority as regards the methods employed in studying the somewhat similar conditions in Oklahoma and Kansas it is apparent from a study of the statistics embraced in the Supply table that the methods were not radically different.

In California, the total reserve of proved undeveloped land reaches to nearly a billion barrels on a per acre ultimate yield of 14,738 barrels from 63,303 acres. Much of this land is in the San Joaquin Valley district, where the Pacific Oil Co. alone has been credited by reputable authorities with some 48,000 undrilled but proved acres. The figures cited in the Supply report also embrace the Elk Hills naval reserve.

There has been enough drilling down the flanks of the structures to prove them for production and drainage has been limited to spots rather than very considerable parts of the California areas considered. Separate structures nearby have already yielded in excess of 50,000 barrels per acre over rather wide stretches of developed ground.

About Colorado and Wyoming it is inferred that the 3241 acres proved undeveloped ground in Colorado refers mainly to the Fort Collins-Wellington domes and Moffat dome, where gas and oil are known to exist on undrilled parts of proved structures under conditions that will make for reasonably large per acre average yields.

As the total reserve set up for Colorado is only slightly more than 46 million barrels, this amounts to less than half of the ultimate yield to come from such flush Texas fields as Mexia and

(Continued on page 48)

Use of Compressed Air or Gas on Sand May Solve Tonkawa's Problem

By A. F. Hinton
N. P. N. Staff Writer

TULSA, Nov. 14

ALTHOUGH the Tonkawa deep sand wells have been exceedingly prolific and highly profitable, most of them have now stopped flowing and are presenting real problems to their owners in trying to find successful means of keeping them on production. Their depth renders artificial production difficult, and the problem often is complicated by the presence of water which must be handled along with the oil.

Most of the wells now on production are being swabbed, while a comparative few are being pumped with various long-stroke devices. Swabbing is an expensive proposition, costing around $50 a day for labor alone, and causing a great deal of wear and tear on tools, wire lines and casing. Consistent swabbing has completely worn out the casing in some wells and has been the cause of a great many fishing jobs which keep the wells off production for varying periods, sometimes causing them to be abandoned altogether. Pumping these deep wells has been only indifferently successful. The fluid stands only about 800 feet in the hole, or less, leaving a lift of around 3600 feet, with the oil in most cases lifeless through absence of gas, and with water as an added burden.

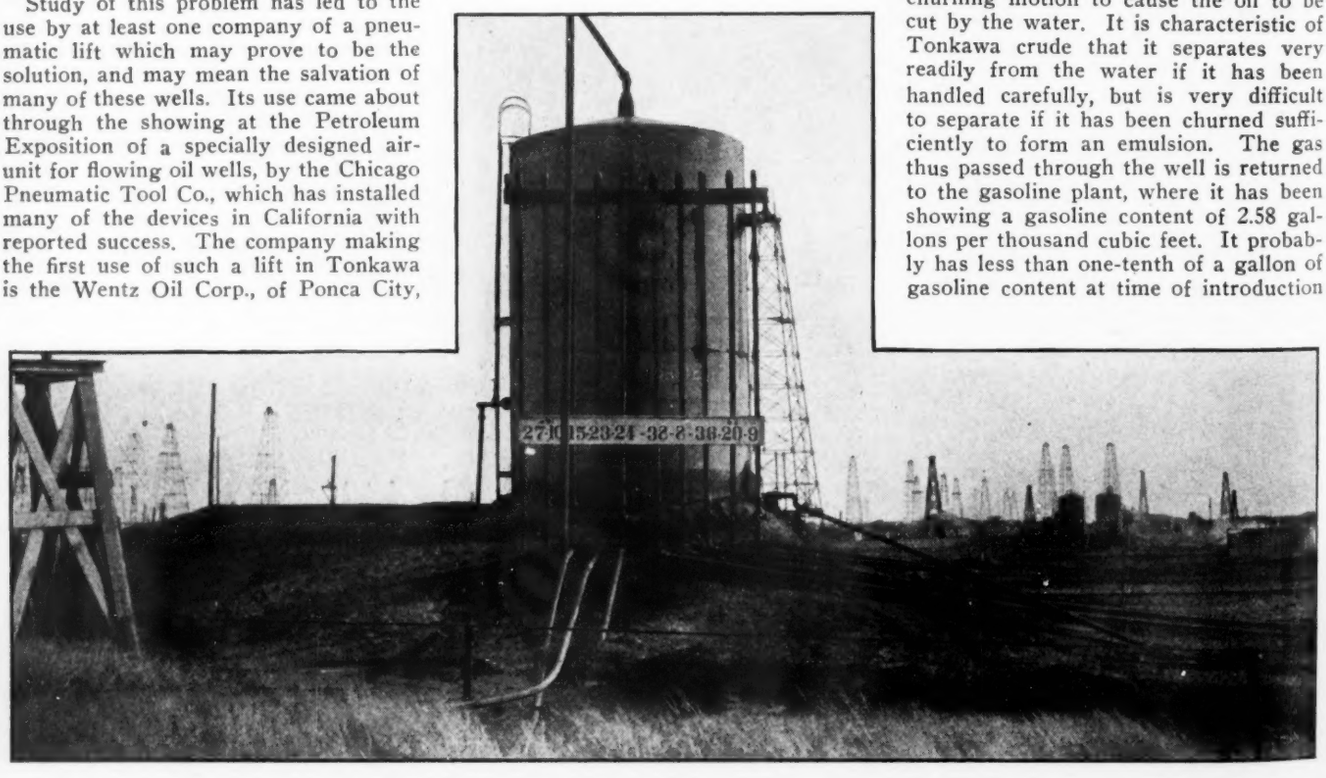
Study of this problem has led to the use by at least one company of a pneumatic lift which may prove to be the solution, and may mean the salvation of many of these wells. Its use came about through the showing at the Petroleum Exposition of a specially designed air-unit for flowing oil wells, by the Chicago Pneumatic Tool Co., which has installed many of the devices in California with reported success. The company making the first use of such a lift in Tonkawa is the Wentz Oil Corp., of Ponca City, whose McKee lease was very prolific during the deep-well development era of the Tonkawa field.

Instead of using air, however, in bringing its well back to life, the Wentz people are making use of residue gas from the company's gasoline plant on the same lease, receiving it at about 30 pounds pressure, compressing it to around 300 pounds, blowing it into the well, causing the well to flow, and recovering it again laden with a rich content of gasoline from its trip down to the bottom of the well and back, it is then run back through the gasoline plant, where its newly-found gasoline is stripped from it before again starting its round trip. Thus the gas performs a real service of conservation, increasing the yield both of crude oil and gasoline from the well and making itself useful where it was formerly merely excess residue.

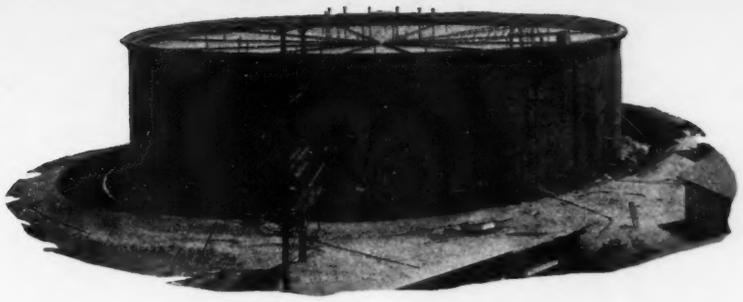
While the use of this method has been in the nature of an experiment, it has functioned well enough to be accredited a success, as it is raising about 250 barrels of fluid, of which 60 barrels are oil, from a well that was dead and non-productive before the gas-lift was tried. However, the well being dead and the fluid level being very low in the hole, the operators have decided that the compressor being used is not large enough and are preparing to install a larger one which they believe will bring up considerably more fluid and will flow the well steadily. The machine now in use will be moved to another well where conditions are not quite so severe.

In practice, the gas at about 250 pounds pressure is introduced inside the casing and outside of a string of 2½-inch tubing which is set at a point about 200 feet off the bottom, with a perforated joint and open end. The bottom of hole is at about 4300 feet, with fluid level standing at 800 feet, or 600 feet above bottom of tubing. The gas pressure tends to lift the fluid up the tubing, resulting in the case of this well in a flow about every 15 minutes. The well will make a flow during which the pressure will go down, and immediately following which the pressure again builds up until sufficient to cause another head.

The oil, gas, and water are run from the well together into a separator, from which the enriched gas is taken off the top, the water settled off at the bottom and the oil conducted thence into the stock tanks. With proper handling, the mixture reaches the separator under very little pressure and with not enough churning motion to cause the oil to be cut by the water. It is characteristic of Tonkawa crude that it separates very readily from the water if it has been handled carefully, but is very difficult to separate if it has been churned sufficiently to form an emulsion. The gas thus passed through the well is returned to the gasoline plant, where it has been showing a gasoline content of 2.58 gallons per thousand cubic feet. It probably has less than one-tenth of a gallon of gasoline content at time of introduction



Individual flow lines into tank, McKee lease, Wentz Oil Corp., Tonkawa



One Oil Company Uses 44 Wiggins Floating Roofs—

It prevents fire.

It stops practically all evaporation.

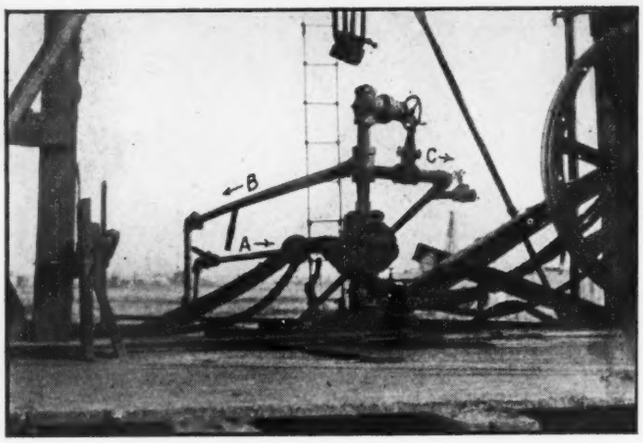
It cannot be blown off or sucked in.

CHICAGO BRIDGE & IRON WORKS

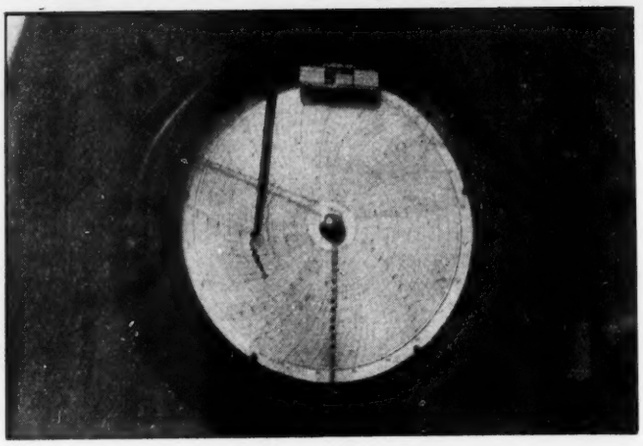
CHICAGO, 2125 Old Colony Building.
NEW YORK, 3146 Hudson Terminal Building.
CLEVELAND, 2206 Union Trust Building.
DALLAS, 1639 Praetorian Building.
SAN FRANCISCO, 1060 Rialto Building.

45-7

The WIGGINS FLOATING ROOF
Keeps Oil In · Keeps Fire Out



Fittings at McKee No. 49, of Wentz Oil Corp., Tonkawa, showing how residue gas is introduced into the well as a pneumatic lift.



Recording gauge in place on Wentz Oil Corp. No. 49 McKee Tonkawa field. The gauge is showing variation in pressure of residue gas introduced into the well to cause it to flow.

into the well. It is also noted that more gas is recovered than was introduced into the well, this inert gas being released from the sand by the pressure.

In an accompanying photograph, fittings at the well are shown, as used on Wentz Oil Corp. No. 49 McKee. The line marked "A" is the one carrying the residue gas down into the casing through the casing-head. Through line "B" the mixture of oil, gas, and water is conducted to the separator, whence the gas returns to the gasoline plant. Line "C" is an emergency line leading direct to the battery of stock tanks nearby. Another picture shows the recording gauge fastened to the sampson post of the well. The jagged line being drawn by the recording needle shows clearly the recurring heads by which the well flows; while the pressure is going down the well is flowing and when it ceases to flow the pressure builds up again.

Although on the edge of deep-sand productive territory, the McKee lease has been highly prolific, with only nine producing wells as compared with a possible 16. The No. 45 on this lease has been one of the most remarkable wells ever drilled in the Mid-Continent field, having produced something like 1,500,000 barrels of high-gravity crude in 15 months. It is still swabbing around 800 barrels daily and is expected to flow at least this amount when the air machine now being used at No. 49 is moved over to it, as is now the company's plan. The nine deep sand wells on the McKee lease have produced approximately 3,700,000 barrels of oil, while wells in the shallower sands have produced almost an equal amount.

During the entire development of the lease, it as been the company's practice to keep individual well production records, and in the deep sand wells hourly gauges have been kept on every well. This in order that changes in the wells' condition could be noticed immediately and that the superintendent was in a position to know at all times just what each well was doing. In an accompanying picture is shown a typical flow tank on the McKee farm, with individual flow lines from 10 wells, each line bearing the number of the well from which it comes. Through the use of stopcocks, any well can be cut out and the next hour's gauge will show how much it had been producing.

Unwarranted Conclusions On Report

(Continued from Page 45)

Powell—therefore, the figures may be considered conservative. Wyoming figures may also be regarded as reasonable.

Undrilled acreage rated as capable of giving up 5000 barrels per acre in Arkansas and Louisiana, 4230 in the former and 2670 acres in the latter, would account for roundly 21,000,000 barrels proved but undeveloped reserve in Arkansas and slightly more than 28,000,000 barrels in Louisiana. Much of the Arkansas reserve may be credited to undrilled acreage in the second and third zones at Smackover and is to be regarded as conservatively dealt with. Small well territory will take care of the North Louisiana figures.

The figures are low enough that the factor of error in one regard may be considered to be capable of reaching a balance through errors of an offsetting nature.

Reduced to per acre ultimate yields the reserve of proved undeveloped lands amounts to 1305 barrels plus, from a total of 1,103,905 acres capable of giving up a total of 1,441,337,000 barrels, according to the technical sub-committees. The first following table shows the distribution.

This compares with the following reserve of producing wells by states, the figures being based on decline curves and conditions of development. Table 2.

The 2,140,648 acres of producing ground measured for future yields to total 3,210,449,000 barrels, therefore, would average 1499 barrels average per acre.

State	Acres	Total Barrels	Per Acre Barrels
Kansas	175,700	79,610,000	453 plus
Oklahoma	264,000	128,800,000	468 plus
Kentucky	84,448	None set up	....
Tennessee	500	None set up	....
Colorado	3,241	46,237,000	14,266 plus
New Mexico	13,960	11,450,000	820 plus
Montana	490	4,422,000	902 plus
Wyoming	7,363	157,879,000	21,428 plus
California	63,303	932,939,000	14,738 plus
Arkansas	4,230	21,150,000	5,000
Louisiana	5,670	28,350,000	5,000
New York	2,000	1,000,000	500
Pennsylvania	11,000	6,000,000	545 plus
Indiana	3,000	1,500,000	500
Illinois	12,000	12,000,000	1,000

State	Acres	Total Bbls. of Future Production	Per Acre Future Production
Kansas	139,300	120,380,000	464 plus
Oklahoma	374,790	572,163,000	1,526 plus
Kentucky	253,344	78,974,000	311 plus
Tennessee	320	None set up	....
Colorado	2,504	2,225,000	888 plus
New Mexico	640	1,450,000	2,265 plus
Montana	2,390	5,478,000	2,293 plus
Wyoming	35,880	137,671,000	3,837 plus
California	62,229	1,207,048,000	19,396 plus
Arkansas	35,940	101,000,000	2,810 plus
Louisiana	50,215	105,520,000	2,101 plus
Texas	162,128	520,540,000	3,210 plus
New York	60,000	15,000,000	250
Pennsylvania	380,000	80,000,000	210 plus
West Virginia	150,000	43,000,000	286 plus
Ohio	275,000	110,000,000	400
Indiana	30,000	10,000,000	333 plus
Illinois	124,000	100,000,000	806 plus

Cracked Gasoline Knoxless-Pullsmore

To appreciate the reason why cracked gasoline is a better motor fuel than straight run gasoline you must understand the fundamental difference between distillation and cracking

Distillation is merely the physical separation of low boiling hydrocarbons (gasoline) from the heavier, high boiling hydrocarbons But cracking is actually a *chemical conversion* of oil, containing no gasoline, into gasoline of the unsaturated, aromatic, napthene and paraffin hydrocarbon series And the unsaturated, aromatic, and napthene hydrocarbons are the primary elements which give cracked gasoline anti-knock properties which no ordinary straight run gasoline, from paraffin or semi-asphaltic base crude, possesses

Cracked gasoline is a premium gasoline worth a premium price

Universal Oil Products Company
Owners of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

We See By The Papers—

Unconscious nonsense concerning the oil industry from the press of the nation.

The Haughty Doodlebug

Gillette, Wyo., Record supplies particulars of an oil finder that is extremely careful of its associates.

S. D. Butcher of Franklin, Nebr., who is the inventor and owner of a doodlebug, a machine, which he claims will locate oil and gas, is visiting his brother Ab. Butcher, north of Gillette.

We have always been sceptical of such a machine, but the number of interesting letters he has in his possession vouching for his instrument, we are lead to belief that Mr. Butcher has a doodlebug that will work.

This instrument, so he claims, is different from other so called oil locaters, in that it does not vibrate or locate minerals of any kind, in fact it pays attention to nothing but oil and gas.

Motorized Bullfighting?

Probably even fighting bulls have been replaced by flivvers. The Calexico, Calif., Chronicle indicates an interesting association.

The Standard Oil company several weeks ago announced its intention to erect a distributing plant in Mexicali and a site was purchased adjoining the bull ring.

Running "tower" on Investors

St. Paul, Minn., Farm Dispatch tells how Townley is getting ready for the boom.

T. O. Bailey, secretary of the state securities commission is to consider a proposal to investigate the activities of A. C. Townley, former Non-partisan leader, in connection with an oil development project near Robinson.

The Bismarck Tribune states that Townley has returned to North Dakota and has constructed a bunkhouse with 50 beds about a mile from the well which created a furore six weeks ago by producing pure gasoline. The well has been taken over by another development company.

Townley is said to have entertained 29 prospective investors and to have told them that he is preparing to drill for oil.

Probably a Doodlebug

Mr. Kerr, of the Ohio Oil Co., is given a promotion by the Augusta, Ill., Eagle and is reported to have been accompanied by a peculiar insect.

During the past week a number of gentlemen interested in learning of the newly developed oil field on Gin Ridge, have been coming and going in Plymouth. Mr. J. K. Kerr of Marshall, Ill., president of the Standard Oil Co., of New York City and another "big oil bug" of Robinson, Ill., were here the forepart of last week, going from Plymouth with F. L. Pugh, district manager of the Ohio Oil Co., for the Plymouth-Colmar field to see the well at Gin Ridge. Mr. Kerr said "the showing was unusually good."

Drillers are so Uncertain

The Chico, Texas, Review warns its customers against taking too much stock in what the well diggers say.

We would be gladest in the world to be able to give our readers some authentic idea as to the prospects for oil at either of the two oil wells now being drilled southwest of Chico. But about all we know is that the well is down something like 4700 feet in the Hoyl ranch, more or less, and the other well across the river is 1700 feet more or less.

Now the reader knows all that anybody knows except the men who are drilling and we have no doubt they are reliable, good men. You can't depend on what they say about it, because they are probably instructed by their employers not to give out any information. When the oil is found we will be among the very first to announce the fact, but until then, don't believe any flying reports.

They're Right in Between

Siloam Springs, Ark., correspondent of the Little Rock Gazette reports some transcontinental geology that makes the situation look good. To cheer up the correspondent some more, we have indulged in some research and find that Siloam Springs is also in the trend between Fort Norman and Venezuela fields.

Special to the Gazette

Siloam Springs,—A second mass meetting to discuss the possibility of striking oil in this section will be held at Gentry tomorrow afternoon. Captain B. F. Alley, a geologist from Florida, and Professor Lieb addressed the firm meeting Monday night, both men expressing their belief that there was oil underneath the western portion of Benton county. They said that this country is in direct line with Teapot Dome and Eastern producing fields.

THE FLAG RUSH, FOLLOWING THE GOOD OLD COLLEGE CUSTOM

THE EDITORS' VIEWPOINT

What a Record for a Monopoly?

"WE ARE told by many that the petroleum business in America is a huge combine and there is no possible hope of getting supplies from any other source, as this monopoly has a strangle hold on every ounce produced in America. Again, as mentioned, a few people state there are a few free refineries."

The foregoing is in a letter from a distributor of more than 400,000 gallons of gasoline per year in Australia, to National Petroleum News and reflects an opinion concerning the oil industry in this country which seems to be quite generally held abroad, and in some quarters in this country. It shows how little conditions in our oil industry are understood by outsiders, because the conditions which resulted in the over-production of both crude and refined oils and the sharp competition for markets, over expansion of refining and marketing facilities and so on, could never have happened were the industry a monopoly. As one exasperated congressman said, "If the oil industry is a monopoly, it is a damn poor one."

The year 1922 was the last one in which conditions might be classified as normal, although the peak production of the southern light oil fields of Mexico that year caused some wavering in the crude oil market here. But in 1923, 1924 and 1925 crude oil production was at such a great rate, new pools were developed so fast; refineries were built and enlarged in anticipation of demand that will be a few years in developing, but were operated near capacity until oil prices fell to dangerous depths; and the quick expansion and overlapping of marketing facilities, all proved beyond doubt that the oil industry is a long distance from being a monopoly.

Had there been a monopoly there would have been no intensive town lot drilling in the Los Angeles basin in 1923; the "golden lane" would have been stretched a bit in point of time at Powell the same year; millions of dollars would not have been paid for leases in the Osage, and Burbank would have been drilled more slowly; Tonkawa, Smackover shallow sand and Salt Creek would not have been brought to their peaks when they were

Had there been a monopoly several hundred refining companies would not have increased their refining capacities, bought all the crude oil they could pay for or get credit on, and each scrambled to get for itself the increase in demand that represents the normal growth in the number of automobiles operated in this country and abroad, thus breaking their markets each year in the season of greatest consumption.

Had there been a monopoly, distributing companies—both Standard and Independent—would not have bid against one another for corner lots as desirable sites for service stations, paying in thousands of instances sums that a few years ago would have seemed fabulous. A monopoly would not repeatedly have shaved prices until profits were less than would have been received from the same money invested in government bonds, or were wiped out as in many cases.

The leadership of the Standard Oil companies in the matter of establishing retail prices has toppled in many parts of the country. Not only have the small price cutters undermined the Standard Oil markets in many parts of the country but some of the big Independents have taken price matters into their own hands and established markets lower than those of the Standard. The Standard has had to meet them—and meet them quickly.

In scattered parts of the country the Standard company operating there still does about half of the business in gasoline. In other parts less than a quarter of the business is done by the Standard. Taking the country as a whole the various Standard companies do not sell more than 35 or 40 per cent of the total volume of gasoline and oil business. This estimate is based on gasoline tax payments in several states.

The flow of capital in the last few years has been more rapid into Independent channels than into Standard channels. The tendency for more than a decade has been away from monopoly just as the branches of a tree spread from the trunk.—R. B. S.

"Penny Wise and Pound Foolish"

"PENNY wise and pound foolish" is the way one South Dakota editor sizes up the gasoline fight which has put the state out of the motor fuel retailing business. This editor, in the Aberdeen Evening News, of November 2, says the state has been "hypnotized by big figures which were so easily built up by estimate and average." He then figures out that, if a motorist should drive 5000 miles a year and got only 15 miles per gallon he would spend, with gasoline at 20 cents a gallon, only $66 a year. If the state could undersell that gasoline by 3 cents per gallon the motorist would save only $10 in a year.

"We have been heedless in spending in so many other directions that when we get right down to figuring the personal equation in the gasoline situation we may come to see that we have been straining at a gnat and swallowing a camel," he concludes his editorial.

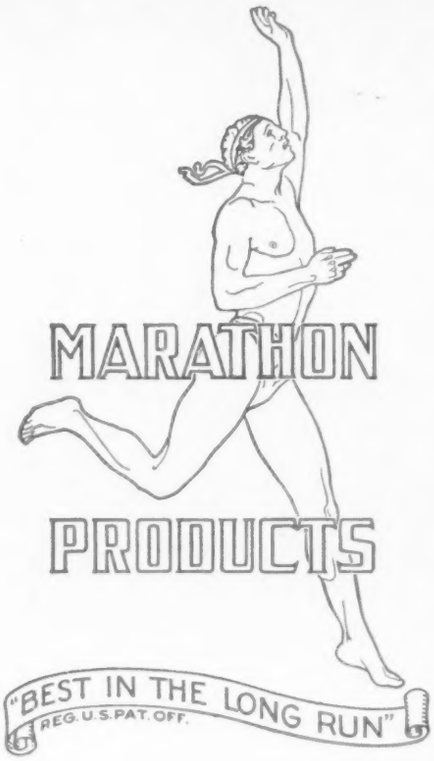
What the camel is, he does not state, but he probably had in mind the millions of dollars invested by the state in various enterprises authorized in the South Dakota constitution as amended in 1918, cement mills, electric light and power plants, grain elevators, warehouses, and flour mills, and so on. Then there is the state's rural credits system which may yet cost the taxpayers of the state upwards of $30,000,000.

Let us do a little figuring ourselves. On July 1, last, 140,787 passenger cars and trucks were registered in South Dakota. Supposing that the state sold gasoline at 3 cents per gallon less than the oil companies, and each of the 140,787 owners saved $10 a year thereby, it would require a saving of 21 years to make up the liability in the South Dakota rural credits system that existed early this year. The amount of liability is taken from the platform published by Governor Carl Gunderson on October 19, on which he hopes to be re-elected next year.

But all the newspapers do not take the view of the Aberdeen editor. Others indicate that the state motorists are about to be "gouged." Says the Watertown Public Opinion:

"Profit taking and profit gouging, such as was suffered by the state before the 'gasoline war' was declared by McMaster, will revive the issue to the point where the constitution will be changed, if necessary, to admit the working of the popular will."

The people of South Dakota always have and always will get a fair deal, as an officer of one of the large Independent companies in the state points out. But a fair deal means that the people of South Dakota must understand the oil companies are not subsidized by the state but must pay their own expenses as well as taxes and pay their stockholders a fair dividend on the money the latter have invested in the enterprise.—R. B. S.



We carry a complete line of oils and greases for Jobbers who prefer to market goods under their own trade mark.

Motor Oils	Compressor Oils
Tractor Oils	Engine Oils
Diesel Oils	Cylinder Oils
Dynamo Oils	Cylinder Stock

Wax

NEUTRAL OILS BRIGHT STOCK

TRANSCONTINENTAL OIL COMPANY

Producers, Refiners and Marketers of Marathon Quality Products

EXECUTIVE OFFICES: NEW WRIGHT BUILDING, TULSA, OKLAHOMA

Sales Offices

Atlanta	Fort Worth	Pittsburgh
Chicago	Muskogee	Sioux City
Des Moines	Bristow	Tulsa
New York	Charleston	

Refineries

Boynton Bristow Fort Worth

Warehouses at convenient shipping points

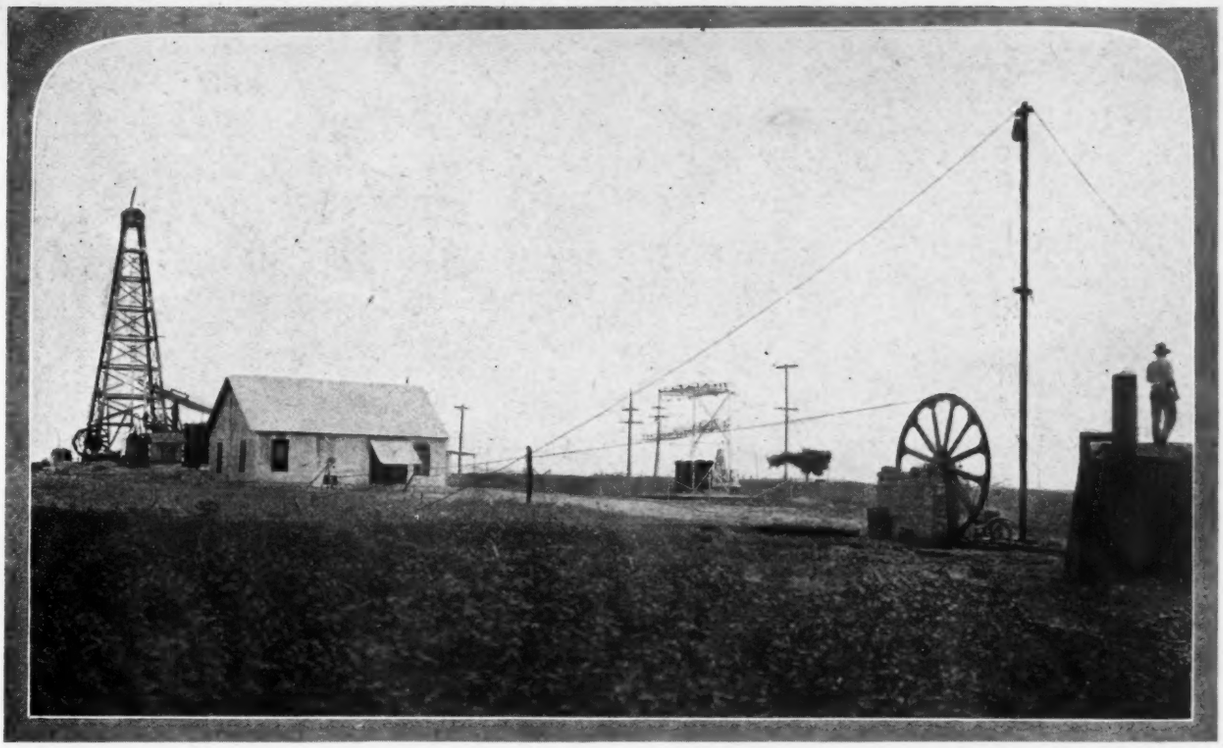


Fig. 1.—Phillips Petroleum Co.'s long stroke pump installation in the Elbing field, Kansas. Motor is housed in building near the well at left; over wheel at right the cable passes into an old well in which counterbalance moves.

Unusual Types of Pumping Equipment Are Used in Kansas Fields

By Lawrence E. Smith
N. P. N. Staff Writer

EL DORADO, KANS., Nov. 14 THERE are two quite distinct schools of thought on how to operate oil wells in the territory centering about El Dorado and Augusta. Some producers have attacked the problem—it is a problem because of the huge quantities of water lifted with the oil—by installing equipment designed to lift several thousand barrels of fluid each day. Experimentation along this line is still under way and innovations are introduced from time to time.

Certain operators sum up their attitude on the question by saying "Why try to pump the ocean?" Generally, they attempt to only "skim" the well, holding the tubing high enough in the well to take off the oil from the fluid column and stop there until the oil is replenished. This may mean pumping for a few hours each day with the usual type of short stroke equipment.

The El Dorado field, which is unusually troubled by water, has been the scene of much research work and experimenting to arrive at a suitable type of pumping equipment. Besides the excessive burden of lifting the water, corrosion of every metal that comes in contact with the oil is a source of endless trouble and expense. Besides ordinary corrosion, electrolysis is set up by the combining of the dilute and the concentrate sulphuric waters and disintegration of rods and tubing is rapid.

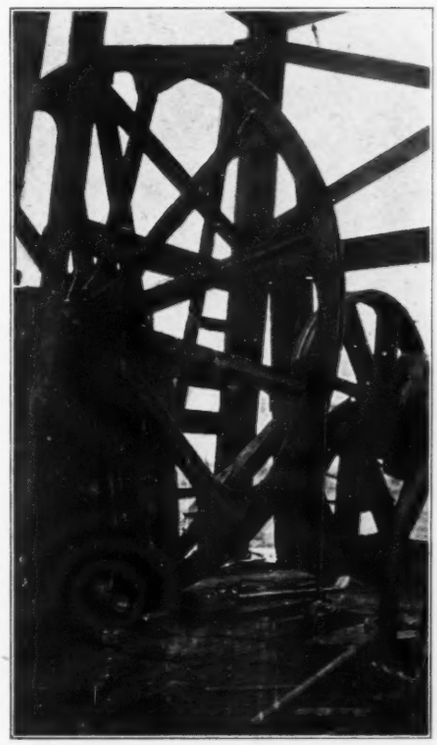


Fig. 2.—Shieve over which cable passes into well, Phillips Petroleum Co. long stroke pump.

Long stroke pumps are viewed favorably in this field and a number of types are in use. Principally, besides lifting larger amounts of fluid, they keep down operating costs by reducing rod breakage because of the slower and less vibratory motion.

The long stroke pumping equipment in the El Dorado and Augusta fields is fairly well known to the industry. The types include the Winters, Farley, Fetty, Beaumont Iron Works and others. One company gave a trial to a California type of pump which works in the casing, without tubing, but as this pump is most valuable in fields troubled by floating sand which is not a problem in this Kansas district, the company has discontinued using it.

Although the El Dorado-Augusta types of pumping equipment are not exactly new, the Peabody-Elbing district has supplied two that are quite novel and are not seen elsewhere. Each has been developed by an oil company and while the writer hesitates to give circulation to the reports of the amount of money supposed to have been spent

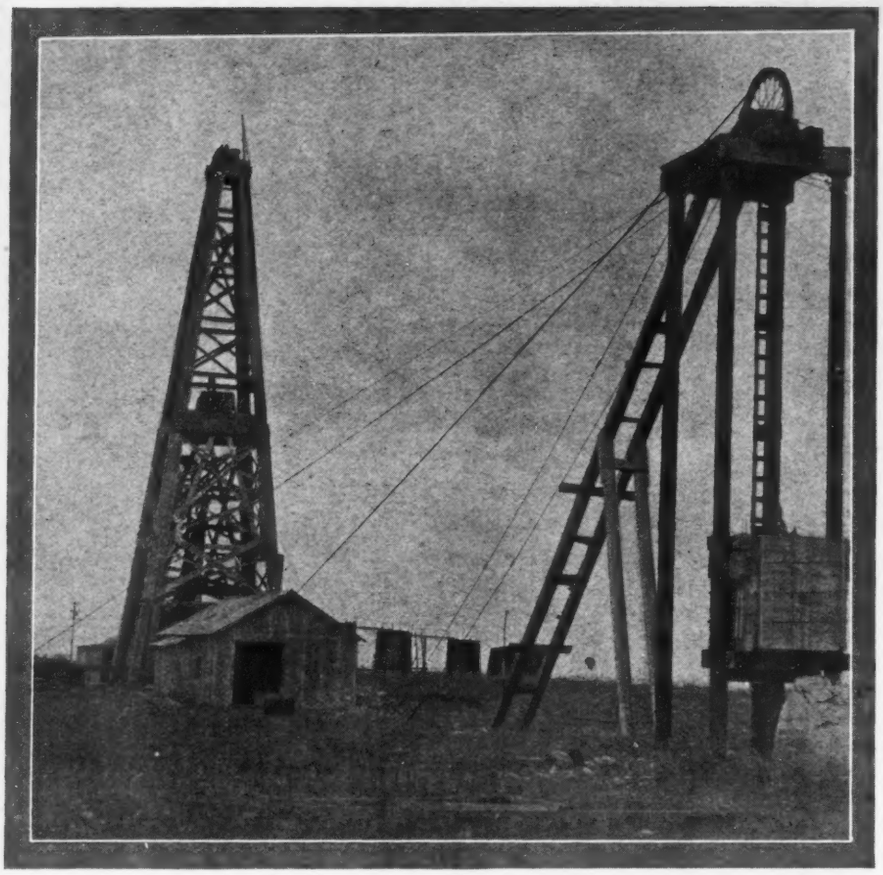


Fig. 3.—Watchorn Oil & Gas Co.'s long stroke outfit in the Elbing district. Counterbalance at right and about half way up derrick is pumping cable shieve.

in trying to develop long-stroke pumps to meet the local conditions, it is certain that they have been quite expensive.

One of these pumping outfits is illustrated in Fig. 1 and is in use in the north end of the Elbing field on a Phillips Petroleum Co. lease. It was developed by the Phillips company. The illustration shows only the well, building containing the motor and the hoist, and the shieve at the right over which the cable passes to the counterbalance. Fig. 2 shows the shieve at the derrick floor, with cable running into the well.

Thus, we have illustrated the two ends of the cable, which, inside the building, wraps around a drum actuated by double reduction gears driven by a 600 h. p. mine hoist motor. The motor has magnetic control reversing automatically, the exact principle of which has not been revealed by the company.

The drum is thus turned first in one direction and then the other, alternating pulling the cable back from the well and thus supplying the upstroke of the rods and turning it the other direction and giving the down stroke.

The stroke at which this outfit has been operated is 60-foot, but there is probably no particular limit that would be placed on it, giving adjustment of the motor to move through a greater or lesser number of revolutions before reversing and a proper counterbalance.

In this installation, the counterbalance is one of the oddest things about it. As shown in Fig. 1, a wheel, companion to the one at the casinghead, is set up. The cable can be seen apparently passing through the ground. That is the case. An old well was located at this point and the wheel was set up here so the counterbalance, made of old drilling jars welded to form solid billets, would ride up and down in the old hole. Balance could also be effected by pumping another well in line with the first.

The wheel illustrated by Fig. 2 is set on concrete piers at the well. When it is desired to pull the rods, it is necessary to move the wheel back.

Cable is used into the well only for about the length of the stroke, the rest of the string inside the well being heavy rods. It requires 40 seconds for complete up and down travel of the rods, or one and one-half strokes per minute. Instead of tubing, the well pumps through 6-inch casing and 6-inch was used to make the working barrel, this being bored out. Cups are 6-inch and long cages were made for the valves. Working barrels is set at about 2500 feet.

There is an 8-inch lead line from the well and the amount of fluid lifted is something more than 5000 barrels a day. The principal result aimed at was the lifting of large volumes of water, which in this field is the besetting problem.

Nearer the town of Elbing, in the same district, the Watchorn Oil & Gas Co. has been working for a year or more with a long-stroke outfit, the outside appearance of which is here illustrated in Fig. 3.

In this outfit a drum is also utilized, but the drive employed is three gear reductions moving two discs. These discs in turn actuate a pair of sliding racks, through connecting rods and crank pins. Above the sliding rack is a main shaft, held in bearings and with pinion meshing with each rack, turning the shaft first one direction and then the other by reciprocating movement. The drum is mounted on this main shaft and the pumping cable is pulled by the drum.

Half way up the derrick is mounted a shieve through which the cable passes. At the other end of the cable is the counterweight, held in a pipe framework. This counterweight is a concrete block. Power is supplied by a 50 h. p. motor.

By changing the position of the crank pins on the discs, the stroke is length-

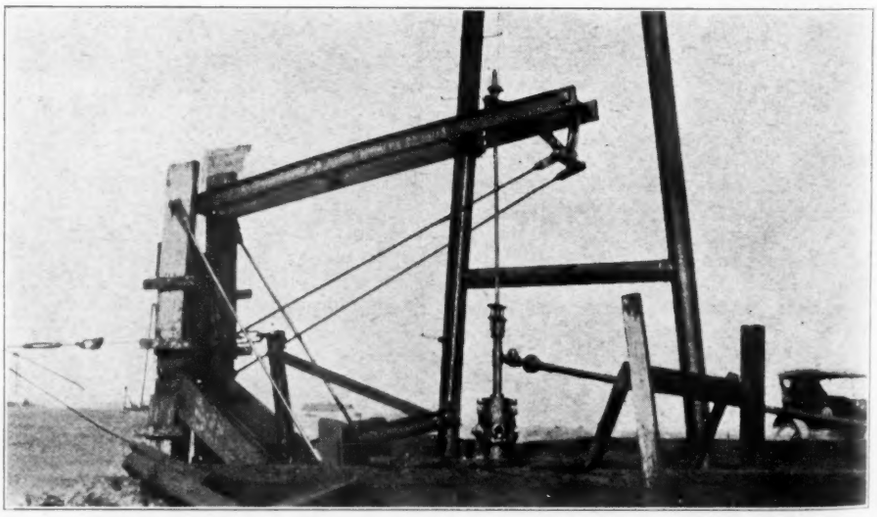


Fig. 4.—Winters straight lift, long stroke jack in use on Empire lease in El Dorado field. Pitman from bell crank to jack beam is shown in white line. Two-legged welded pipe affair is a pulling mast and has nothing to do with the pumping jack.

Fig. 5.—Farley geared long stroke pumper on Watchorn lease, Elbing field.

ened or shortened. Its range is from 13 to 20 feet and it has been operated most of the time at the latter stroke length. At this position it makes 8 strokes per minute.

This installation has called for considerable attention and while it did lift large volumes of fluid, the expense has been great. One of the chief troubles has been repeated breaking of the cable. Various makes of cable have been tried, but the same trouble has been experienced with all of them.

Fig. 4 shows the Winters jack, used in the Kansas fields for power and pull line and with a variation for beam pumped wells. The illustration is of one used in a pull line. It provides a 5-foot stroke, if that much is desired, and makes about 20 strokes per minute operating at this length. It provides a straight lift with no wear on the polish rod. It "picks up" more slowly than the usual jack and its most rapid travel is in the center of the stroke, thus tending to avoid a jerky motion.

With the Winters outfit on central power operated wells the pull rod connects to one end of the bell crank arm, the bell crank being free to oscillate about its axis which is anchored to the base. At the other end of the bell crank a pitman is attached which, by reason of the motion imparted to the bell crank through the pull rod, actuates the jack beam.

To the extreme end of the jack beam another bell crank is secured, free to oscillate around its axis; its axis, due to its position on the jack beam, moves in an arc of a circle. To one end of the second bell crank tie rods are connected, each end of which terminates in a bearing. These tie rods at the other end move about an axis or bearing attached to the jack post.

The up and down motion imparted to the jack beam by the pitman causes the second, or smaller, bell crank to oscillate about its axis and the other arm of the second bell crank, to which the polish rod is connected, to move in a direction parallel to the center line of the well, providing an absolutely straight lift.

Another form of this is used on the end of the beam for wells pumped in that manner. In such instances, the first bell crank, to which the pull rod is attached, is, of course, omitted, but the principle of the second bell crank, shown in Fig. 4, on the end of the jack beam, is the same. The stroke length is changed by putting on a larger or smaller bell crank.

In the Kansas fields, a number of the Farley long stroke pumping outfits are in operation. One of these is illustrated in Fig. 5. It is a simple form of gear reduction. The belt wheel on a countershaft drives a pinion which in turn drives a gear. The crank pin on the gear can be moved to several positions, providing adjustment of the length of stroke. On the back end of the beam, range of three to six feet is provided, but the Samson post is off center in the direction of the gear, which gives a five to 10-foot stroke on the adjuster end of the beam.

Recently, the Magnolia Petroleum Co. fitted one of these Farley outfits on a lease in the Augusta field with a herringbone gear, replacing the spur gear, providing a more positive motion and still easier travel of the rod column.

These are but a few of the many types of long stroke pumping outfits now in use and with the close attention that is being given to the subject by operators and manufacturers, others doubtless will be in use before long. The aim is a three-fold one: To provide for lifting of large quantities of fluid; to give an easy motion, reducing breakage of rods; to provide a positive transmission and thus reduce power losses.

"CUT OIL"

is a problem in CHEMISTRY

An "emulsion" represents a condition of a liquid which can be fully, scientifically and economically corrected by use of the chemical process. Use TRET-O-LITE process when you have cut oil and tank bottoms that require treating.

Wm. S. Barnickel & Co.
St. Louis, Mo.

Tret-O-litE

Reg. U. S. Pat. Off.

TAYLOR *Unbreakable* FORGED STEEL FLANGES

Highest quality flanges for every class of piping work in the oil fields from light tanks to the highest pressure oil still work. Large stock on hand. All styles and sizes. 150-250 and new 400 and 600 pounds standards. Special flanges of all types Write for new flange catalog showing all the new standards.

AMERICAN SPIRAL PIPE WORKS
Box 485 CHICAGO, ILL.
New York Office: 50 Church St.
NPN10-21I-RTG

SINCE National Petroleum News started its discussion of the cracking patent situation in its various angles, the point has been raised by many both inside and without the oil industry as to the efficient administration of the U. S. Patent Office—whether such a multiplicity of patent claims on cracking oil could possibly have come about if the patent applications had been properly handled.

The accompanying letter, from an individual well versed in patent office procedure and patent law, brought up this question and pointed out some of the weaknesses of patent office procedure.

Paul Truesdell, staff writer for this publication, has made a first hand study of conditions in the patent office, particularly in their relation to the cracking patents, having in mind the points brought up in this letter. The letter is published herewith since it serves as an introduction to this discussion. Mr. Truesdell's series of articles will follow in succeeding issues.

"Careful Procedure" in the Patent Office Is a Myth, Says a Reader

A Letter to the Editor

Editor
National Petroleum News
Sir:

THE statement by Mr. Halle of Dubbs interests recently published in your paper states enough half truths to make it about 50 per cent accurate. It is true, of course, that the procedure for the issuance of patents is clearly set forth in patent laws of the country. It should be true that the issuance is done by "careful procedure" but that is not true. Arithmetic will demonstrate that it cannot be true.

There are about 500 examiners dealing with applications in the patent office. The Patent Office Gazette of Oct. 27 listed 1087 patents issued in the week ending on that day. That gives the examiners about two apiece, or an average of three days to a patent. There are about 3,500,000 American, British, German and French patents alone without counting some 250,000 Canadian patents and Dutch, Swedish, Norwegian and those of other countries whose languages the patent examiners do not read.

The examiners are supposed to search all these patents, giving them an average of 7000 each for them to examine for each application they consider. A fast man can skip through from 750 to 1000 patents a day with a swift glance at the drawings, so even if they examined the patents in the most sketchy way it would take seven days for each application. And this does not consider the time necessary to scan the technical journals of the world.

The examiners simply cannot and do not do it.

Unfortunately for industry, the patent office is mostly manned by young graduates from technical schools who regard their patent office jobs simply as stepping stones to careers as "smart patent lawyers." Also, the office is very much overworked. The latest satistics show it is 40,000 cases behind. Division 31, which handles inventions in oil refining has 683 applications awaiting action.

The boys do their best but they "don't know so darn much" and they have a great deal to do. Their characters are various and some of them allow almost anything while others seems unwilling to let anything go through, both with altogether too little rhyme or reason. A number of years ago the General Electric took an appeal to the supreme court in the Steinmetz case, on the point of patent office precedure. As a result of the decision then the patent commissioner refused to entertain any more petitions on points of procedure. Everything then became a matter of appeal. And that ruling has been followed by succeeding commissioners. So there is a lack of uniformity of practice in the patent office. There are 53 divisions and each does about as it pleases. Really there are 53 little patent offices.

So while Mr. Halle is telling the truth as far as he knows about procedure in the patent office he is telling only part of it.

He is correct in saying that there have been few cases of fraud in the patent office. He might have said they are so rare as to be practically nonexistent. From that angle the office is absolutely clean. Mr. Halle, however, under estimates in saying that errors may occur in occasional instances. Last week, with 1028 patents issued, under the laws of chance there must have been a few of them that contain mistakes. With all respect to the patent office and the "smart patent lawyers" they are not infallible and it would be impossible to get 1087 technical documents without some of them containing errors. And those were only one week's grist.

Mr. Halle also is correct in saying that the patent office cannot protect itself against frauds based on perjured affidavits. But it may use a little common, ordinary human sense. Sometimes it does but it could do so oftener with good results.

Issuance of patent is of course no guarantee of its validity. However, it is prima facie valid. Nobody can really say in advance whether a patent is valid or invalid under the present court practice.

Since appeal to the supreme court was taken away in patent cases the various circuits of which there are nine, have run wild. A patent may be held valid by one circuit court and invalid by another, which condition has actually arisen. A patent should be the creature of law interpreted on purely legal principles. But the nine circuits are interpreting patents as equity matters which opens the door for sob stuff and "jury law." There is no man today who can say what will happen to the best or worst of patents if it goes into court. The result is apt to be different if it is in Florida where all patents are "Yank ideas," or in New York. In any event, the law of the third circuit is not the law of the second circuit and neither corresponds to the law of the fourth circuit.

As Mr. Halle readily admits, all his inventions are on minor points. Sometimes it is true, as in the case of the eye in the needle or the skeleton drum, the minor point may work out to be a major point but not often.

Mr. Halle's company has a great many patents but half a dozen of them may be taken as typical. Now, in cracking oil in a coil, releasing the vapors in an expansion chamber and passing the vapors through a reflux, there are three mechanical elements. And there are three liquids, the charging oil, the oil which has been through the coil and the expansion chamber, and the oil coming back from the reflux.

In Trumble 1,281,884, charge oil goes to the system and back again. The reflux joins it. So all three liquids go through coil and tank. It is patentable virtue to send once-passed oil back. In Dubbs 1,392,629, refluxed oil and charge oil go through the system but the once-passed oil is removed. In Dubbs 1,488,325 charge oil and reflux go through the system together but the once-passed oil never goes back. It is patentable virtue to discard it. In Dubbs 1,484,445 there is no once-passed oil to be discarded.

The invention is sending the refluxed oil into the still in which the charge oil

also enters. In Dubbs 1,525,281 once-passed oil is discarded and the charge oil goes through the reflux on its way to the coil, taking with it reflux condensate. Apparently the distinction between this patent and some of the others is the use of a pump. In Dubbs 1,534,927 once-passed oil goes back again and with it goes refluxed oil. But the refluxed oil may join the once cracked oil in the vaporizing chamber or it may be shunted around it. Dubbs 1,546,634 is a patent on the apparatus for doing these things.

It is submitted that this is a study in permutations and permutations only.

The difficulty with these patents and many others equally immaterial issued by the patent office today goes back to a fundamental difficulty which is that alluded to by Mr. Halle where he says the "novelty of invention is not necessarily the use of new devices," but is sometimes the result of a combination of known elements.

That is unfortunately true. Very many years ago American courts ruled in favor of combination claims: a man with a single new element in a machine was forced to claim the whole machine, the new part being merely in combination with the other parts. In other countries the patent offices allow a man to claim the old machine "characterized" by the new element. Here he must go through the dismal iteration of all the related elements. I do not think it is good sense but that is the way the law is, as Mr. Halle points out. Now, unfortunately, Mr. Halle's inventors and many others are taking advantage of this situation by securing these permutation patents. They have an old and well known machine and a tube-and-tank cracker is merely a water tube boiler under an alias, with a little variety in the way the liquids circulate. And they are securing an indefinite number of patents each directed to all the elements that make the water tube boiler plus a little variation. There is no end to this.

There are not many water tube boiler plants which are absolutely identical; every one for local reasons has little changes here or there over every other one. If a big manufacturer were to make a practice of patenting every water tube boiler he put in anywhere the number of patents would soon become intolerable. But that is practically what Mr. Halle's company is doing. If the words tube-and-tank cracker be substituted for water-tube boiler the situation is exactly that.

It is perfectly true that Mr. Halle has no monopoly of the art of cracking oil. But if he does secure enough patents on enough minor variants in the art it will soon become impossible for anybody to put up a plant without stubbing his toe against one or other of these modifications. No man can carry them in mind. And from a legal point of view the situation becomes rather serious. A case might be imagined where a man put up a tube and tank cracking apparatus in all good faith not knowing Mr. Dubbs' patent 1,546,634. Maybe he might also put in a pump as per 1,525,281. Then he could be sued under the first mentioned patent and all his profits collected. In an apparatus like this it is impossible to allocate the profits by its use of this element or that element. The machine is operating as an entirety and under familiar supreme court doctrine if an infringer cannot allocate the profits the patentee is entitled to all of them. So all the profits could be collected under 1,546,634.

After that proceeding is over another suit might be started under 1,525,281 and all the profits again collected. Then the rest of the half dozen patents might be taken seriatem and the profits once were collected under each of them. Mr. Halle's protest against unwarranted adoption by the art of the features of the Dubbs process would come with better grace if he would point out what those features are.

However, if Mr. Dubbs' organization is in a position to give as much service to the refineries as he says, it would be a very good thing. It would be too much to expect the oil refiners to use the facts and figures available in the handbooks employed by the water-tube boiler makers.

Sales at This Station During Month Average $1 Per Person in Town

TEXARKANA, ARK.-TEX., Oct. 14.

A single service station of one company, doing a $20,000 business per month in a town of about 20,000 inhabitants, is the record established by Dixon and Horney, Inc., of this city, distributers of Waverly motor oil, according to E. R. L. Boyd, district manager at Wichita, Kans. for Waverly Oil Works Co., Pittsburgh.

The large new service station which the company recently opened, is located at the intersection of all highways leading in and out of Texarkana, giving the station an opportunity to catch the tourist trade. The station is equipped with wash room, ladies' rest room, ice water drinking fountain, and other modern conveniences. At the station is also maintained a tourist information bureau where daily reports on all road conditions are received.

A tag, indicating the time and place of crank case filling which is put on all cars coming into the Dixon & Horney station for crank case service, recently played a part in the capture of a man who was guilty of stealing a car.

A recent advertisement which announced the opening of the new station, was entitled "we have competitors in price, but none in service." In playing up the efficient service it is prepared to give its customers, the advertisement went on to state, after the opening word "SERVICE!" in large type:

"Dixon & Horney means just that—giving more than is expected and not just that which is necessary. Conducting our business from the customer's standpoint, and insisting on courteous, intelligent and helpful attention—this is the distinguishing policy that draws the motorist to 'the most beautiful service station in the southwest'. We are as jealous of our reputation of handling dependable merchandise as we are of our service."

The thief had driven away from Texarkana to Dallas in a car belonging to D. T. Perry. A policeman in Dallas arrested him for speeding and the absence of a key in the switch made the policeman suspicious. When the offender gave his name, it did not correspond with the name the policeman found on the tag which had been attached under the hood by the Dixon & Horney station man. The man was taken to jail and Mr. Perry recovered his machine due to the aid of the crank case tag.

Announcing the new Buckeye Visible

THE Findlay Visible Pump Company announce their new models in both hand and air operated which will be known as Buckeye Visibles, super-quality Pumps of attractive design.

The Buckeye Visible is the logical development of the original air-operated Findlay Visible Pump, brought to perfection by Buckeye engineers and built with scrupulous accuracy and from the highest quality materials complete in the shops of The Buckeye Traction Ditcher Company.

Back of every Pump is the Buckeye tradition, your surest guarantee of unfailing quality.

Buckeye Visibles are in use in hundreds of filling stations all over the country, delivering with almost unbelievable speed and accuracy hundreds of thousands of gallons daily. Ask any operator.

The Visible Pump Co.
Incorporated
Findlay - - Ohio
U. S. A.

SPEED The Buckeye Air Operated Visible is the fastest operating pump made; a slight pull on one lever fills the container and on another drains it into the car. Five gallons require just *twenty seconds* from storage tank to car, and the hand operated Buckeye is one of the fastest hand Pumps on the market.

INSTALLATION The Buckeye Air Operated Visible has the simplest and most convenient form of installation. Pump can be located any distance from supply tank. Two pumps can be operated from one supply tank by our special hook-up.

ACCURACY The Buckeye Visible meets with the hearty approval of all inspectors and sealers. The Quik-Serv or nozzle control, especially has an unusual appeal, inasmuch as it eliminates draining of the hose, over-spilling or underfilling of tanks and any manipulating of pump mechanism. This is the 100% "Visible" from the customer stand-point.

FREEDOM FROM REPAIRS Upkeep in the Buckeye Visible is a negligible item. There is practically nothing to wear out. The first pump of this type ever installed (over 7 year old) is still doing active duty.

Buckeye

This brings the complete story of this extraordinary pump

YARD-O-LITE

Handsome, Cheerful, eight and ten feet tall.

Complete with special sockets, Tulip Globe and approved wiring.

"Bring them in with Light"

Write for details

The Visible Pump Co., Inc.
Findlay, Ohio

I am interested in complete specifications and prices on the Buckeye Visible Pump.

Firm Name _____

Address _____

City _____ **State** _____

Signed by _____

Title _____

Some Small Steam Economies That Can Make Important Saving

By Paul Truesdell
N. P. N. Staff Writer

CLEVELAND, Nov. 12

RIGHT now when many refiners are laboring under the handicap of having a boiler capacity too small to furnish the steam needed in expanding plant operations, the question of solving this problem without making a heavy investment is mighty important.

Of course there are three ready remedies for this condition and they look simple. They are:

1—Put in additional boilers.

2—Increase the load on existing boilers.

3—Reduce the consumption of steam for the various purposes.

The first of these is simple, all right, but it means the investment of a lot of money.

The second is practicable to some extent but usually not to a very large extent, especially where the boiler installations are old and out of date.

That leaves the third remedy as the one most readily available to the refiner at the lowest cost. A great many factors enter into the problem of reducing steam consumption—that is making a smaller quantity of steam do the same work for it is of course assumed that refining operations cannot be reduced to save steam.

Many Littles Make a Much

A great many ways of saving steam are not so easy to discover as it may seem. There is one man who has charge of the operation of several Mid-Continent refineries who has made a close study of methods of conserving steam and the results he has obtained, he says are really remarkable. While making a number of small economies in the use of steam at various points will not of course, make up for the deficiencies of a totally inadequate boiler plant, the sum of the small savings that are possible make a pretty big total and remove a heavy load from the boilers.

So that in a refinery where the boiler plant is nearly equal to the load, where only slight forcing of the boilers is necessary, it is possible to get plenty of steam for necessary uses at better pressure with less wet steam and other evils and do away with the necessity of installing another boiler which would involve a needless investment because an additional boiler would bring the plant capacity far above what would be needed for a long time to come.

This article purposely avoids discussion of such improvements as superheaters, steam soot blowers, combustion controlling devices and similar specialties the value of which is everywhere acknowledged but which many refiners hesitate to install on old style boilers that have been long in service. It deals only with the simple and inexpensive ways and means of conserving steam that have been worked out by the engineer mentioned and put in effect in the various plants of which he has charge.

He lists places for the saving of steam in the order of their importance as follows:

1—Pumps.

2—Process work, especially stills.

3—In heating heavy lubricating and fuel oils to permit of pumping them in cold weather.

In the first place, this engineer says, one of the best ways he knows of to save steam in the operation of the pumps, is to take them off the boilers altogether and operate them by electricity. It is questionable whether in cases where the current would have to be bought this would represent a saving over steam. This probably would depend upon the various conditions and factors in various plants.

Gas Engined Generator Sets

However, this man says "make your own juice." In some of his plants he has installed oil or gas engines to operate generators and motorized the pumps, or most of them, about the plant. He says this means a very great saving over operating the pumps on steam. Such a plant, using natural gas engines was described in National Petroleum News, May 6, 1925 issue, page 59, in an article on the operating methods used at the plant of the Stellar Refining Co., Newark, O.

The student of steam conservation states that in many plants the installation of a couple of oil or gas engines, according to which fuel was most available and economical under the conditions at the particular plant, would do away with the necessity of installing another boiler, at least in refineries where the demand for steam did not exceed the capacity of the boilers by too wide a margin. Of course all would depend upon the size of the refinery, the number of pumps to be operted, the demand for steam for other equipment besides pumps and other factors.

The power plant at the Stellar refinery, which runs about 1000 barrels of crude a day and cracks about half that amount of reduced crude, consists of two Reeves vertical gas engines of 150 horsepower each, direct connected through a jaw clutch with a 300-ampere 220-volt 60-cycle General Electric generator which generates 100 kilowatts at a speed of 277 revolutions per minute and the cost of the entire outfit installed was about $13,000. He stated that this equipment took the place of two 150 horsepower boilers which would have cost considerably more.

Only one of the gas engines works at a time, the other being a stand-by and one or the other is switched onto the line by the operation of the clutch. From this could be figured how much of an installation would be needed on a refinery of larger capacity. The operating cost of the generator set is said to be much lower than that for an equivalent of boiler capacity.

Permits Use of Centrifugal Pumps

In addition to the steam saving feature of such a generator set, another advantage claimed for it is that it permits of the use of centrifugal, rotary or screw pumps for uses where they are to be preferred to the piston type. Centrifugal pumps, of course, can be driven by steam turbines but they are seldom found advantageous except on large, heavy duty pumps and many re-

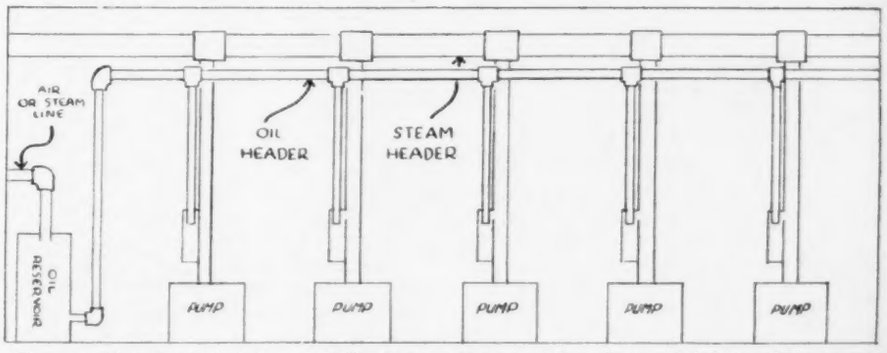


Figure 1—System devised by a Mid-Continent refinery superintendent to lubricate piston pumps.

finery boilers do not deliver steam dry enough to work well in turbines.

But in plants where the installation of generating equipment does not seem advisable, and where the disposition is to stick to piston pumps, the refinery manager being quoted says that much can be done in the way of steam saving through the handling of the pumps themselves.

"The best thing to do with pumps I have seen in some refineries is to throw them out on the scrap pile," he says. He goes on to say that the investment of from a few hundred to a couple of thousand dollars in new pumps in some refineries would bring returns that would be a pleasant surprise to the men responsible for their operation.

Because, he says, a great many pumps are working at very low efficiency, using a lot of steam to pump a little oil. This is often because they are worn out from improper lubrication. Like the shoemaker's children and the blacksmith's horses who have to go barefoot, he asserts that the refiner's pumps often have to go without oil or are oiled with fuel oil or something else that the refiner would not dream of selling to a customer as a lubricating oil. Many pumps also, he says are improperly located.

There is of course, always the tendency for the cylinders and piston rods to wear out of round, making them leaky of steam and of oil. This is hastened by friction due to poor lubrication. The custom of metering the flow of oil through pipe lines by counting the strokes of the pump arose, of course, because of the fact that knowing the displacement of the pump, the number of strokes would indicate accurately the volume of oil passing through.

Many Far Below 100 Per Cent

This would be if the pump was operating at 100 per cent efficiency. How far wrong it is possible to go, as demonstrated at many refineries, by counting pump strokes, is an indication of how far below 100 per cent many piston pumps operate.

This refinery operator has put in a system of testing the pumps at the plants under his management. A measured quantity of oil is placed in a tank and a pump started transferring it to another tank. Knowing the size of the pump it can be readily calculated how many strokes should be needed to transfer the oil from one tank to the other. The excess of strokes over this number represents the inefficiency of the pump. A careful record is kept every time a pump is packed and the cost of packing, labor and so on is charged against the pump. When the pump becomes so worn that packing has to be done too frequently, is is scrapped and replaced with a new pump.

At the group of plants managed by this man, a very simple and efficient system of lubricating the pumps is used. Figure 1 shows how this system works in lubricating a battery of pumps. Heads are welded on the top and bottom ends of a piece of 12-inch casing about six feet long. This is set vertically in a corner of the pump house. An air line is welded into the top of the oil reservoir and an oil line is welded in near the bottom.

The oil line, as shown in the drawing, rises and joins a header which runs alongside the steam header and which has an oil line running down alongside the steam line to each pump.

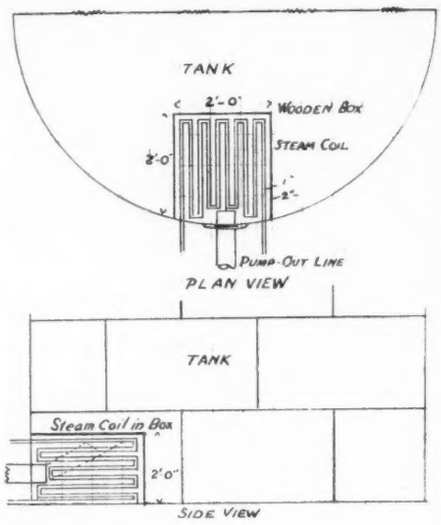


Figure 2—Plan view and elevation of heating coil box to heat heavy oil for pumping from tanks.

The oil line ends in a regular lubricator of conventional pattern attached to each steam line. A slight air pressure is held on the oil reservoir, which assures the lubricators being kept filled. Only the highest grade steam cylinder oil is used for the lubrication of these pumps.

Suction Lift Cuts Efficiency

Another thing that this man blames for the inefficiency of many pumps is the fact that they are located so that they have to exert a suction lift. Most piston pumps are designed on the assumption that they will operate with flooded suction. More power is developed on the discharge stroke than on the intake stroke. This means using more steam to pump less oil.

Pumps always should be placed so that their suction end is lower than the source of supply, in order to get efficient operation, he says, even if it is necessary to set them in concrete lined pits.

A great saving of steam used in stills can be made, this authority says, if the men running the stills know how much steam they are using, which in many cases they do not. One way of measuring the steam consumption exactly is by the use of manometers, which was described in a story on the operation of the McKean County Refining Co. at Bradford Pa., several months ago.

Another way, less accurate but still productive of saving, is by the use of the "harp" described in a story of the operation of the Skelly Oil Co. plant at El Dorado, Kan. some time later. With the harp arrangement, the still operator can try out various amounts of steam in the stills and run them with the smallest amount that will produce the desired results.

One engineer, who made a special study of the use of steam in stills estimated after his investigation that in a skimming plant, about 20 per cent of the steam generated by the boilers goes into process work and that a complete refinery takes on the average 50 per cent of the steam raised for use in crude and steam stills. This indicates that there is an important chance for saving in the steam used in distillation.

Another steam saving device, perhaps of minor importance from that standpoint that this refinery superintendent has devised is used in heating for pumping lubricating and other heavy oils in the winter. He says that in usual practice a great deal of steam is wasted in heating up heavy oil by means of steam coils in the tanks, with the added disadvantage that the oil is frequently burned.

This man's device consists of a steam coil two feet square of one-inch pipe inclosed in a heavy wooden box and set inside the tank over the mouth of the pumping out line. The plan view and elevation of this device is shown in Figure 2.

When it is desired to pump out the tank, steam is turned into the little coil and pumping is begun at once. Thus the cold oil is drawn through the hot coils and reaches the pump in a state of easy fluidity. Once started, the heating continues as the oil flows out, the only oil heated up being that immediately around the outlet.

Thus the use of steam is trifling and the overheating of the oil which in some cases is serious enough to necessitate re-running, is avoided.

Adds New Equipment

OGDENSBURG, N. Y., Nov. 13.—B. A. Evans, wholesaler and exporter of petroleum products, has added new equipment, including one 20,000-gallon storage tank at Potsdam; one 20,000-gallon tank and two 12,000-gallon tanks at Massena; one 6000 gallon tank at Ogdensburg, for denatured alcohol; and one 110,000 gallon storage tank at Ogdensburg for gasoline.

During the past year Mr. Evans installed about 50 new visible pumps at his stations at Hammond, Gouverneur, Potsdam, Massena, Ogdensburg, all in New York, and at Prescott, Ont.

Business to date in 1925 has increased one-fourth over a corresponding period in 1924, Mr. Evans states.

Prairie Shipments Gain In October

Staff Special

TULSA, Nov. 12.—October shipments of the Prairie Pipe Line Co. increased substantially over those of the preceding month, thus recording the first gain they have shown since last June. October shipments were 3,990,645 barrels as compared with 3,688,343 barrels in September, an increase of 302,302 barrels. Daily average was 128,730 barrels in October as against 122,945 barrels in September, which was the lowest figure recorded during the current year. The highest figure of 1925 was that attained during March, when the Prairie shipped an average of 158,836 barrels daily through its lines.

Shipments of the Prairie Pipe Line Co., for this year have been as follows:

Month	Shipments	Daily Average
January	4,441,290	143,268
February	4,322,556	154,377
March	4,923,929	158,836
April	4,415,855	147,195
May	4,719,835	152,253
June	4,716,115	157,204
July	4,822,612	155,568
August	4,318,497	139,306
September	3,688,343	122,945
October	3,990,645	128,730

Kentucky Crude Output Up In September

LEXINGTON, KY., Nov. 14.—Production of crude oil in Kentucky in September exceeded the output in August, according to figures compiled by the Kentucky Oil Men's Association. The output for the two months by counties, was as follows:

	Sept.	Aug.
Allen	26,915.87	26,279.31
Barren	26,007.94	24,676.82
Bath	1,332.92	1,061.82
Boyd	.....	148.51
Clinton	17.24	742.74
Cumberland	3,640.08	3,926.98
Davies	2,306.00	1,540.04
Elliott	1,043.49	955.90
Estill	35,134.06	36,262.97
Floyd	502.49	341.26
Hancock	3,402.17	2,792.96
Hopkins	1,491.36	1,492.32
Jackson	162.40	.....
Johnson	84,202.96	81,235.96
Knott	211.54	.....
Lawrence	55,944.97	57,411.31
Lee	140,526.94	146,100.19
Logan	.....	155.08
Magoffin	74,450.88	68,854.17
McCreary	145.46	376.83
Menifee	237.39	.....
Monroe	1,422.23	1,687.69
Morgan	586.89	711.13
Ohio	17,515.96	16,415.18
Owsley	1,511.59	1,654.12
Powell	18,490.74	17,516.70
Simpson	821.58	1,106.60
Warren	40,111.01	37,689.43
Wayne	10,942.69	11,814.33
Wolfe	4,340.94	3,815.04
Total	553,419.79	546,765.39

SCOTTSVILLE, KY.—Inter-Cities Oil Co. is operating three stills to capacity now and is manufacturing cleaners' naphtha and V. M. & P. naphtha.

E. R. Wyant, manager of the refining and pipe line department, states that business in his section is good, prices are fair, crude production is holding up to a good average and producers are receiving good prices.

Rand-McNally Coupon Books Permanently Increase Your Filling Station Business 25% to 50%

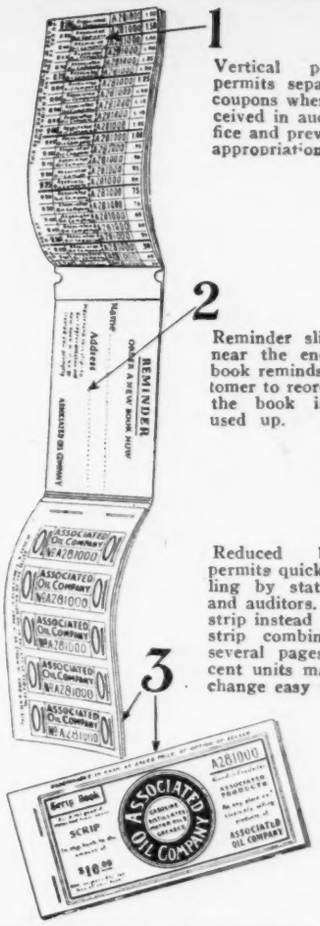
You can easily understand that once customers or casual patrons have your coupon books, good only at your stations, that you will receive all their patronage as long as any coupons remain in their books.

Oil companies operating ten stations or more, prefer RAND McNALLY STRIP STYLE COUPON BOOKS, due to their economy and efficiency, because station attendants can handle customers more quickly, and the auditing department saves a great deal of time and labor in checking collected coupons.

RAND McNALLY COUPON BOOKS are made specially for you and in use get cash in advance—reduce overhead—dispense with costly bookkeeping—control credit—simplify collections—prevent loss, errors, disputes, red-tape and waste. The very name RAND McNALLY is your assurance of excellent workmanship, perfect printing, correct numbering, careful packing and prompt service.

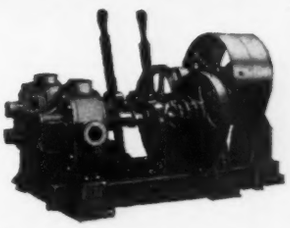
Write for samples, prices and complete information.

RAND-McNALLY & COMPANY
Dept. Y-26
536 S. Clark Street Chicago


1
Vertical perforation permits separation of coupons when first received in auditor's office and prevents misappropriation
2
Reminder slip placed near the end of the book reminds the customer to reorder when the book is nearly used up.
3
Reduced bulkiness permits quicker handling by station men and auditors. The 5c strip instead of the 1c strip combined with several pages of one cent units makes odd change easy to settle.
ASSOCIATED OIL COMPANY

TRAHERN

TRAHERN



BACK OF THIS PUMP

is the specialized engineering knowledge of Trahern engineers, the vast mechanical facilities of the Trahern plant, and 68 years of success in producing fine pumps.

TRAHERN superiority is recognized.

Complete line of Gasoline and Oil Pumps. *Write for Catalog 50.*

GEO. D. ROPER CORPORATION

ROCKFORD, TRAHERN ILLINOIS

PUMPS FOR PERMANENCE

SCOUTING The LOBBIES

MARCUS A. MONAGHAN, who spends his working days in Cleveland, O. and is at home in Lakewood, O., is presently to set forth with Mrs. Monaghan, three daughters and one son, for a six months' tour of the world—or as much of it as can be reached in that time.

Mr. Monaghan is president of the Cumberland Gasoline Corp., which operates a large natural gasoline plant in the Big Sinking field of Lee county, Kentucky and accounts for most of this kind of gasoline produced in the state. He is also substantially interested in several other oil companies all having the general headquarters in Cleveland and in addition is a dominating interest in various manufacturing enterprises of Ohio.

He came into the oil business several years ago via a gas development near Cleveland. Some real estate occupied by one of the Monaghan factories turned out to be favorably located in the new gas field and once in, Mr. Monaghan extended his participation to other natural gas properties and subsequently to oil.

The Monaghan family will first turn their faces west, touring the Orient and by easy stages will visit the Holy Land northern African ports and will conclude the extended trip by visiting the chief points of interest in Europe.

J. G. RICHARDS, manager of operations in Venezuela for the Orinoco Oil Co., is now in Columbus, O., for for a stay of several weeks at general headquarters of the Pure Oil Co., of which the Orinoco is a subsidiary. With the conclusion of his business there, he will return to Maracaibo accompanied by Mrs. Richards and their daughter, who have been living in Cincinnati until Mr. Richards should have completed the steady traveling necessary to complete examination of the large concession which the Orinoco holds.

Mr. Richards is a geologist and has had extensive experience in South America. He joined the Pure Oil Co. in February, 1919, and spent much of that year in Colombia. The next two years were spent in exploring the Amazon River and its tributaries—a piece of work that took him far from civilization and developed quite a number of thrilling encounters with wild beasts and scarcely less wild people.

The Pure Oil has not been heard of much in foreign development, but it has quietly carried on comprehensive study of anything that looks like possible oil territory. The Yucatan region of Mexico called for attention by this company in 1922 and Mr. Richards spent a considerable part of that year there. He was given charge of geological work in Venezuela in November, 1922, and has been at work in that republic ever since. Recently, with a transfer of Richard Sloan from Venezuela to Columbus, Mr. Richards succeeded as general manager in Venezuela and will be in direct charge of whatever drilling is done. The Pure has to date been occupied with preparations for development, but is now squared away so that it should figure in the list of active operators in Venezuela before many months have passed.

"JOE" CURTIS, marketing executive with the Continental Oil Co. at Denver, had business in Chicago along the latter part of the week of Oct. 25 and found that, by hurrying along a little, he could finish up in time to go up to Ann Arbor, Mich., Friday night and see Michigan play the Navy on the 31st. "Joe" was a former player on the Michigan team and captain in 1906, close to the time of the famous "'Point a Minute" teams.

So he wired Coach Yost from Chicago, saying he would be on hand the next day and to be sure to see that he had a seat for him. He reached Ann Arbor early the next morning, and found the coach at the depot along with some of the other old players who had returned for the Navy game. Curtis was somewhat surprised at the reception committee, and found out later that his wire had not yet been received and that Yost and his crowd were down at the depot on the chance some of the old players would be coming in on the early morning train from the west.

But anyhow, Curtis had lunch with his old coach and some of the famous players of his time and a little before and later sat on the side lines while Michigan showed the Navy the western brand of football.

WALTER K. CAMPBELL, whose first two initials really mean "well known," has located the operating headquarters of all his companies except the Western Oil Corp., in the Brown Building, Wichita Falls, Tex. The move was made Nov. 1. The Western Oil Corp. will continue to have its main office in Tulsa.

In going to Wichita Falls, Campbell is returning to familiar territory. He spent much of his time there during the Burkburnett heyday and has continued to operate properties acquired in that territory.

W. M. McFARLAND, who has been hither and yon in the oil industry for several years, seeing quite a bit of territory, has recently taken on additional responsibilities as representative of the Elliott Core Drilling Co. in Tulsa. Besides this, he is one of the office staff of the Independent Torpedo Co., in Tulsa.

McFarland is a native of Findlay, O., and as usual with Findlay boys who start in the oil business, he worked for the Ohio Oil Co. in the production department. Being a versatile cuss, he tried his hand at newspaper work on the Findlay Republican. He wasn't able to stay away from oil, however, and after putting in several months for the Ohio at Haynesville, he joined on with the Independent and went to Tulsa.

The product he is pushing for the Elliott people is the Elliott Alco core drill and he has met with considerable success in placing this device, used in rotary work, among Mid-Continent operators.

THE marriage is announced of William B. Hassett and Mrs. Sallie Fetter Lindenberger, of Lexington, Ky., in that city on Nov. 5.

Mr. Hassett is well known in the oil industry of the Mid-Continent and Kentucky. He has long been engaged in the refining division of the industry, starting years ago with the old Gunsberg & Forman partnership and later associating himself with eastern capitalists in inaugurating the Imperial Refining Co. The same interests own the Kettle Creek Refining Co., at El Dorado, Ark. Mr. Hassett is president of both companies and lives in Tulsa.

W. I. NOKELY, who has been manager of traffic and transportation for the Paragon Refining Co., Toledo, O., for the past six years, has severed his connection with that company to become transportation commissioner for the Toledo chamber of commerce. Mr. Nokely assumed his new duties Nov. 1.

Previous to his association with the Paragon, Mr. Nokely was with the Food Administration Grain Corp. during the war, and before that he had been for 19 years in various capacities in the traffic department of the Chesapeake & Ohio Railway Co. He is also chairman of the petroleum and petroleum products committee of the Great Lakes Regional Advisory Board.

"advance announcement"

WAIT FOR DEC. 1

For the advance information of oil marketers attending the convention of the National Petroleum Marketers Association we are pleased to announce that BOWSER will place on the market December 1st 1925 a new visible pump embodying the construction and sales features which have resulted from ever-broadening experience

Those marketers who are at this time interested in the purchase of visible gasoline equipment will find it profitable, we believe, to await our December 1st announcement..

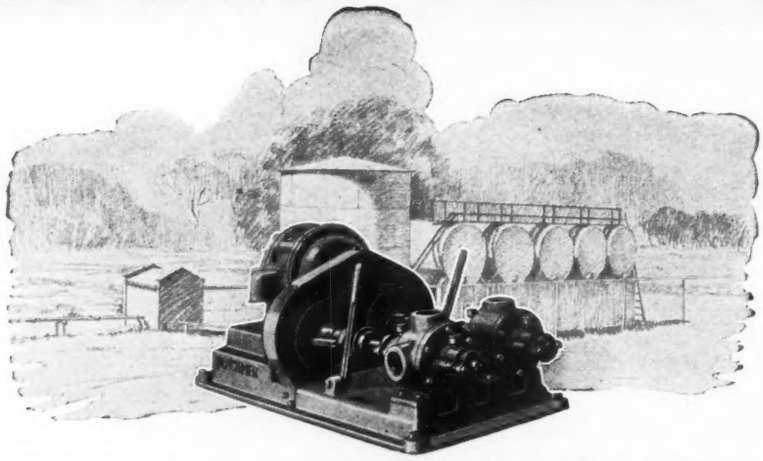
Those who care to leave their names and addresses with us will be assured of receiving the first descriptive literature released.

S. F. Bowser & Co. Inc.
By S. B. Beehtel, Pres.

This notice is the much-talked about feature of the Bowser Exhibi at the big Convention at Louisvill this week

BOWSER
ESTABLISHED 1885

BLACKMER
ROTARY PUMPS



Built for the Bulk Station

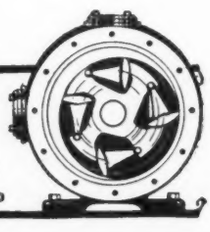
In designing the Blackmer Standard Double Unit the Blackmer engineers were guided by the pumping requirements of the bulk distributing station. Now Blackmer offers the bulk station owner a unit especially suited to his needs and at a lower price, made possible by standardization.

The Standard Double Unit, pictured above, consists of two 100 G. P. M. Blackmer Pumps, one right hand and one left. It is mounted with clutches and power plant on an extra-heavy cast iron base with or without space for a fire wall. Power may be either of three types, to meet the customers needs: electric motor, Novo Engine or New-Way air-cooled engine.

In this unit is incorporated the Blackmer Principle of automatic-take-up-for-wear which makes possible the long and uninterrupted pumping service for which Blackmers are noted.

Units powered as desired.

Write our nearest branch office for catalog and prices



BLACKMER PUMP Co.
Grand Rapids, (Formerly at Petoskey) Michigan

Chicago New York Buffalo Philadelphia Louisville New Orleans
Detroit Baltimore Atlanta Minneapolis Pittsburgh Kansas City
Boston Milwaukee Houston St. Louis San Francisco

Oil And Grease Formulas

200 formulas, modern in every particular, have been prepared in a simple, non-technical style by Forrest A. Hoff.

They are of value to the refiner, jobber, compounder, broker and lubricating engineer.

Just attach your check to this ad and return it to us now. $50 is the reasonable cost of all this valuable information. Synopsis sent upon request.

National Petroleum News
830 Caxton Building **Cleveland, Ohio**

Industrial Notes

Jenkins Bros., New York, manufacturer of Jenkins valves, has put on the market a new line of Jenkins medium pressure bronze globe and angle valves, which have been designed to fill the need for a valve with the renewable disc feature that will meet higher pressures than recommended for standard pattern valves. A feature of these valves is the bonnet and union in one piece which screws on to the outside of the body threads giving added strength to the body end. Another new feature is the "ball joint" formed when the bonnet and body are screwed together, making a strong, though easily removable joint, according to the company.

* * *

The Cleveland Metal Products Co., Cleveland, O., manufacturer of Perfection oil cook stoves, heaters and other kerosene-burning household devices, has changed its corporate name to Perfection Stove Co., effective Oct. 28. The change is made for the purpose of connecting the company's name more closely in the public mind with the trade-name "Perfection" and because so many letters are addressed to the company as the Perfection Stove Co. There is no change whatever in the organization or policies of the company.

* * *

J. P. Hanna, vice president of the National Recording Pump Co., Dayton, O., manufacturers of oil marketing equipment, left Dayton the first of November for a combined pleasure and business trip to the Pacific coast. Mr. Hanna will be gone about six weeks and some of the cities he will visit include Chicago, Seattle, Portland, San Francisco, Los Angeles, some of the more important points in Texas, Louisiana, Tennessee and Kentucky.

* * *

The Heil Co., Milwaukee, Wis., manufacturer of tanks, dump bodies and hoists, has under construction a new early colonial design administration building, which will be completed by the first of the year. It is 40 feet wide, 120 feet long and 40 feet high. The first floor will include a large lobby, conference rooms, sales, advertising and accounting departments. Executive offices will be on the second floor, as well as the engineering and stenographic departments.

* * *

The Cincinnati Ball Crank Co., Cincinnati, O., has just placed on the market an improved Balcrank type "D" pressure lubricator. This gun will handle any grade of light or heavy automotive grease, will produce from 4000 to 10,000 pounds pressure and can be used with any popular lubricating system, the company states.

Industrial Catalogues

Lewis-Shepard Co., Boston, Mass.—A bulletin describing the new type PB stacker designed for the piling and unpiling of various kinds of stock and merchandise, has been published. The new stacker is the first portable elevator to be made on the worm-drive principle, according to the company. The devise is recommended for speed, smoothness of operation, and ruggedness.

* * *

Butler Mfg. Co., Kansas City, Mo.—A bulletin has been published describing the new full-light ready-made drive in service station built by the Butler Mfg. Co. at the actual request of a big oil company, the former company states. These portable service stations are steel buildings with windows occupying all sides. They are easy to erect, are noncombustible, well ventilated, sanitary and economical.

* * *

S. F. Bowser & Co., Inc., Fort Wayne, Ind.—"Lube Logic" is the title of the 36-page booklet this company has off the press. On each left page is an illustration in attractive colors of the correct sort of containers for lube oil, while on some pages two kinds are shown, the right kind and the "what's wrong with this picture" kind. The booklet is devoted to the merchandising of lube oil in as attractive and neat a manner as possible and the illustrations show how this can be done.

New Oil Station Construction

Lynn, Mass.—Leader Filling Stations Corp. is building bulk plant at Danversport, Mass. The station will have rail and water facilities. Storage tanks for 850,000 gallons of light oils and 30,000 gallons of lubricating oils will be erected, according to S. Burwen, president.

* * *

Wynne, Ark.—Cherry Valley Motor Co. is building a filling station and garage. It is installing new gasoline pumps and equipment, reports E. A. Rolfe, agent for the Pierce Petroleum Corp. here.

* * *

Sioux City, Ia.—Miller Oil Co. is building service station here, reports Herman F. Miller, general manager.

* * *

Deming, N. Mex.—Magnolia Petroleum Co. is building filling station, which will open about Dec. 1.

* * *

Parkersburg, W. Va.—The Benoline Co. of West Virginia is building service station on Marietta road.

GULF Refining Company

General Sales Offices
PITTSBURGH, PA.
District Sales Offices
New York, Houston, Atlanta, Boston, New Orleans, Tampa, Philadelphia

REFINERS OF OKLAHOMA TEXAS AND LOUISIANA

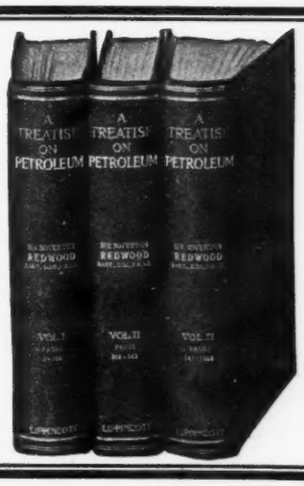
PETROLEUM

REFINED OIL
GASOLINE
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT

Fuel Oil--Lubricating Oils

CYLINDER ENGINE
CORDAGE

RED AND PALE PARAFFINE OILS



Information on all branches of the petroleum industry is to be found in the 4th edition of A TREATISE ON PETROLEUM by Sir Boverton Redwood.

To obtain this valuable set make your check for $39 payable to

NATIONAL PETROLEUM NEWS
811 Caxton Bldg. Cleveland, Ohio

Lots To Be Thankful For!

IT'S in the air! There's no getting away from the spirit of the season—when every mind is full of thoughts of turkey, pumpkin pie, and cranberry sauce—football, cozy firesides, and good will toward fellow men------

At this time, we can think of no greater pleasure than telling our many friends and patrons how sincerely we appreciate their faith in Tiona Products. The Tiona Petroleum Company has much to be thankful for------

First—a group of Pennsylvania refiners manufacturing only the highest grade of Pennsylvania Products.

Second—an intimate relationship with western refiners who make the finest of Mid-Continent and Texas Oils.

Third—an ever-growing prestige among distributors of high quality oils.

Fourth—a continuously increasing number of satisfied users who demand Tiona Products exclusively.

As evidence of our appreciation of all these "good things," Tiona pledges itself to always keep the quality of its products at the high standard it has attained today—to always live up to the reputation of

Headquarters For Better Oils

Chief Tiona is particularly thankful because wherever he goes he meets old friends. It is his creed that when he parts with a man he must do it in such a way that when they meet again, both will be glad. After all, success in anything lies in mutual service.

Tiona Petroleum Company

Widener Bldg. **Philadelphia**

Portable Gasoline Plants are Multiplying In Mid-Continent Flush Fields

By J. C. Chatfield
N. P. N. Staff Writer

TULSA, Nov. 12

IN wartime or peace the petroleum industry is proud of the fact that it fully meets the demands of the public for gasoline, lubricants and fuel. By intrepid exploration or by inventive genius in improving manufacturing processes the industry anticipates the needs of the people and supplies them abundantly.

For several years the manufacturers of natural gasoline have been intensively studying the problem of processing flush casinghead gas in new fields without being forced to lose money by building expensive plants which would have to be shut down for want of raw material in a few months. The last year has seen the problem solved through the development of the portable plant.

In California during the period of large flush production of both gas and oil, numerous gasoline plants were built which were soon running far below capacity. In the Mid-Continent the same has been true to a somewhat lesser extent as manufacturers have adopted an aggressive policy of "getting the gas" in new fields.

Early last summer the first portable natural gasoline plant was erected in the Mid-Continent field. The Skelly Oil Co. erected a small charcoal plant to process the gas from a single wildcat well near Stroud. The plant was in operation within six weeks after the well was brought in, at least six months before it would have been wise to have erected a permanent plant.

A few months prior to that, the Southwestern Engineering Co., Inc., developed a portable oil absorption plant in California to meet the special conditions in that state. Within the past few months C. F. Braun & Co. has developed a portable oil absorption plant, one of which was exhibited at the recent International Petroleum Exposition here.

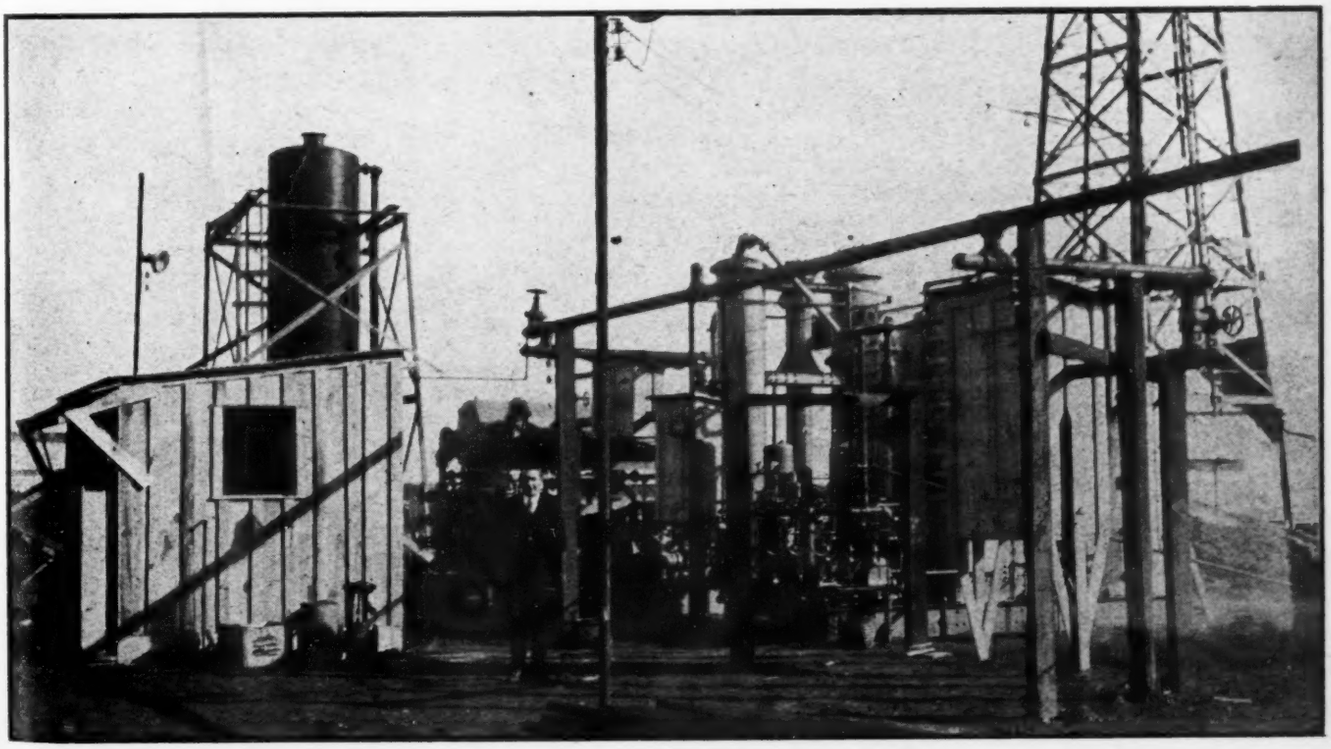
The portable gasoline plant is designed to be moved into a new field as soon as it is ascertained that there is a sufficient supply of gas with a fair gasoline content. It may be operated while the field is being developed and until a permanent plant can be built on a scale commensurate with the probable supply of more or less settled gas. The portable plant can then be moved to a new location or used as an auxiliary of the permanent plant.

An example of the use to which the gasoline industry will put the portable plant is seen in recent operations of the Comar Gasoline Co. (Roxana-Marland). Early in September, about two months after Comar developed its properties in the new Braman townsite field, S. C. Carney, general superintendent of the gasoline department of the Roxana and of the Comar Gasoline Co., had two portable Southwestern gasoline plants moved in.

Since that time the two units have been producing from 6000 to 8000 gallons of gasoline per day and the company has been proceeding with the construction of a permanent plant. Within a few weeks these two plants will be moved to the Garber field where they will be put to work on Roxana's flush gas in that field.

Roxana's Shroeder lease in Garber has had a compression plant in operation for a number of years. It had two units processing a half million cubic feet of gas daily from 17 shallow wells. The plant was producing around 1400 gallons of gasoline per day. When the 2300-foot sand was discovered the plant was increased to 5 units, handling 3,300,000 cubic feet per day and producing in excess of 14,000 gallons of gasoline.

In the late summer the deep sand was reached and there has been a tremendous increase in gas production.



First two portable gasoline plant units installed by Roxana Petroleum Corp. at Garber. One is a Braun and one a Southwestern Engineering Co. absorber. Edward Carleton, Southwestern Engineering Co., is standing by operator's shed familiarly known as the "Dog House." N. P. N. Staff Photo.

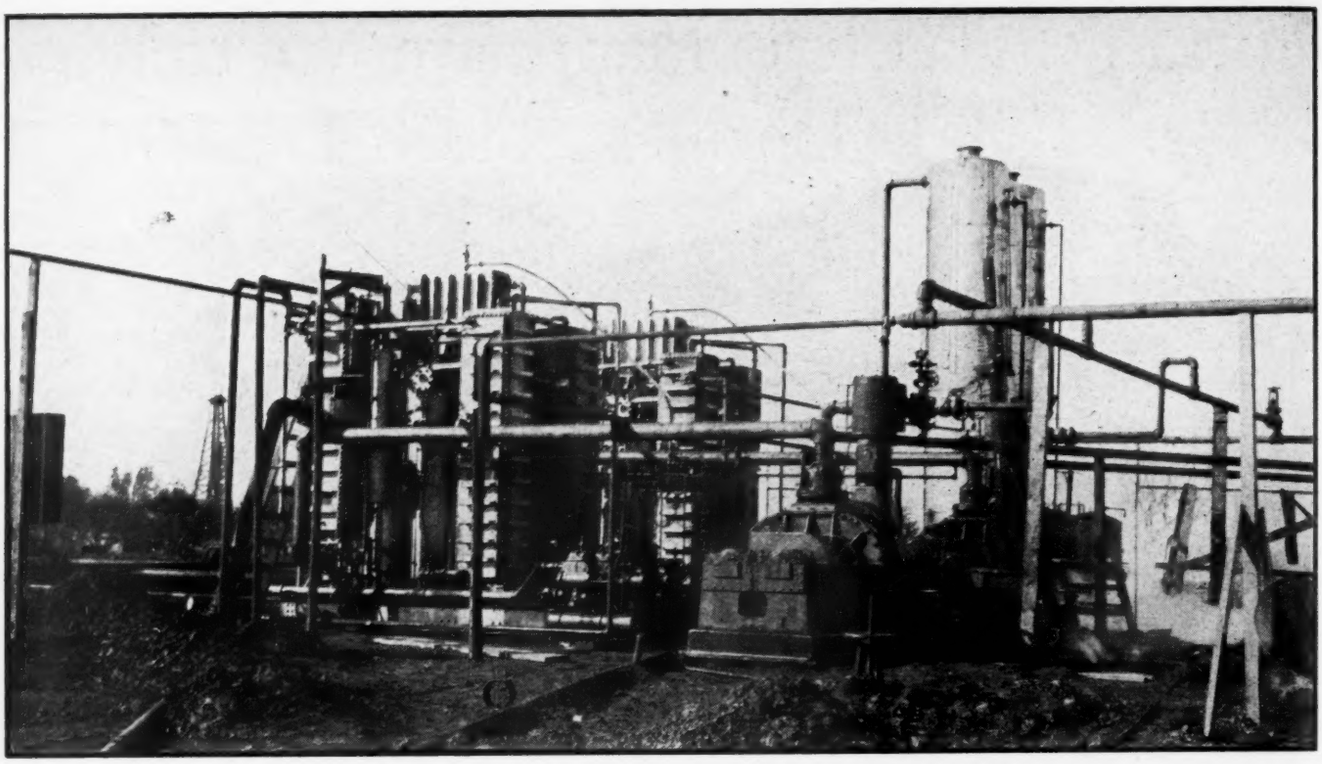


Fig. 2. Two Southwestern portable plants at Braman with Roots rotary gas pumps supplying pressure. N. P. N. Staff Photo.

Present gas available on the lease is from 15,000,000 to 20,000,000 cubic feet per day. By old methods all of this gas would have to be wasted that could not be put through the permanent plant.

Five Plants on One Lease

A week ago one portable plant was put up as an auxiliary to the permanent compression plant. The first day it made 7500 gallons of gasoline and that rate has continued without interruption. A Braun plant has been erected beside the first plant which is a Southwestern and it will be placed in operation this week. A second Braun plant is on hand ready to be unloaded and set up. In a short while the two plants which have been in operation for two months in Braman will be moved to Garber making a total of five portable plants on the one lease to supplement the permanent plant. Instead of having to be satisfied with 14,000 gallons of production daily Roxana now has over 21,000 gallons and will probably double that production in the next few weeks.

An accompanying photograph, shows the Braun and Southwestern portable plants on Roxana's Shroeder lease at Garber as they appear today. Scaffolding is still around the Southwestern absorber and the Braun absorber is not yet in place. It will be observed that the pumps, distillation and heat exchange equipment is mounted on a steel frame which is placed directly on the earth. No concrete is poured for the entire plant.

Recording instruments for the two plants are housed in small wooden sheds and steam lines which as yet are not insulated are supported on temporary wooden supports. Flood lights for night operation are placed on poles around the plant.

It is not strictly exact to refer to the portables as "portable gasoline plants." There are two features of a natural gasoline plant which play little or no part in the portable plant and which constitute a large part of the investment of a permanent plant.

Normally to operate a natural gasoline plant it is necessary to lay an extensive system of gathering lines in the field. The gas must be collected from a large number of wells. In most fields there must be a pull of vacuum to bring the gas to the plant for processing and often power to return the residue gas to the producing lease for power purposes.

The permanent plant must have a large engine installation to bring the gas in from the field, compress it and boost it through the plant. The simplest part of the operation is robbing the gas of its gasoline after it once gets to the plant.

The portable plant is designed for use in new fields where well pressure will bring gas to the plant and push it through the absorbers. Power is used largely to circulate oil and pump the finished gasoline to storage and thence to the loading rack or refinery.

Essentially, there is nothing new in the portable gasoline plant. The pumps, heat exchanger and distillation equipment has novelty only in its compact arrangement on a steel frame. In addition there must be a steam plant, absorbers and a water cooling tower.

Rotary Gas Blowers

When gas will not come to the plant steadily with sufficient well pressure the plant begins to take on the aspect of a permanent plant since power must be developed to transport the gas. This condition has arisen in Braman already. While wells in that field are still flowing, the gas pressure is more or less intermittent.

To provide an even flow of gas to the Braman plants Roxana has installed two Roots rotary gas pumps. A view of the gas pumps in conection with the two Southwestern units is given in Fig. 2. Mr. Carney plans to try out another type of gas pump known as the turbo-blower in some other field when the need arises.

Addition of the Roots rotaries creates the necessity of a good deal more steam to operate the plants. The two Southwestern units there have eight oil field boilers to provide steam. They pull a vacuum of four to five inches on the intake and boost the gas through the plant at a pressure of around 15 pounds per square inch. At present each pump is handling from 2,750,000 to 3,000,000 cubic feet of gas. The gas at Braman has a gasoline content of 2½ to 3 gallons per 1000 cubic feet and the two units have produced a maximum of 10,300 gallons per day and an average of around 8000 gallons for over two months.

The portable oil absorption plants require a pressure of around 15 pounds per square inch to achieve the best results. In the operation of the portable charcoal plant by the Skelly Oil Co. at Stroud it was found that well pressure could go down to 5 pounds without the necessity of installing a blower.

As originally designed, the Southwestern portable plant was calculated to produce around 2000 gallons of gasoline per day running two million feet of one gallon gas in the California fields. In Braman, Thomas and Garber fields

of Oklahoma where the plants have been operating they have been processing much richer gas. The one unit now operating at Garber has been running at an overload of 400 per cent.

Roxana has been making a product virtually meeting Grade A specifications. The gasoline has been going to storage tanks with a gravity of 79 A. P. I. and a recovery of 89 per cent.

Marland Plant at Thomas

Marland Refining Co. has two units in service at the Thomas field which have just been completed. The distillation units are housed in a small structure. The sheathing of the building is not new. It was erected with the thought in mind that it may be torn down again and moved to a new location.

Roxana plans to test out the ability of the portables to operate in cold weather without being enclosed in a building such as Marland has put up. All the Roxana and Comar plants built thus far have been put up without protection from the weather. If the plants can run efficiently without being housed it will add to their mobility and subtract from the costs of installation and moving.

The Southwestern portables are equipped with bubble type absorbers, while the Braun plant will have a typical Braun tower with redwood baffle material. The bubble type absorber is an innovation in the Mid-Continent field and some operators are planning to observe results in comparison with conventional types by maintaining accurate operating figures where the two are operated side by side on the same gas.

Blend with Crude

Thus far all of the portables which have been erected have been close enough to a railroad or existing gasoline lines so that the product could be moved direct to a refinery or loading rack. At Thomas, Marland has a line connecting with its gasoline line from the Tonkawa field to Ponca City and the production is pumped direct to the refinery. At Braman it is less than a mile to a railroad where Comar has built a loading rack. At Garber, Roxana already had a permanent plant and loading facilities.

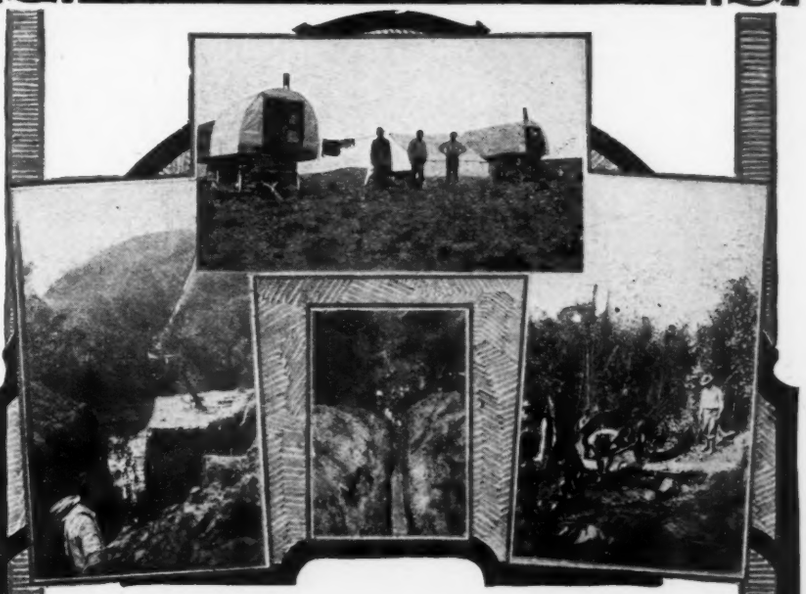
In new fields far from a railroad where the building of a line and loading rack would be expensive it is the idea of some manufacturers who are likewise producers that the gasoline might be mixed with crude and shipped to the refinery to be extracted with the refinery gasoline. This method has been found wasteful but it might be more economical than building an expensive loading line.

JULESBURG, COLO.—The Robison Service Corp. has moved its offices from Fort Morgan, Colo., to Denver, according to Harry I. Robison, president.

The company recently leased the filling station of Sam T. Schrock at Holdredge, Neb. Business is reported to be good.

ENGINEERS & CONTRACTORS IN NATURAL GAS AND OIL

HOPE



Large and varied and widely distributed as are the activities of the Hope Company, each one of them receives the personal attention of some one of the Company's executive heads.

Hope Service is thus a personal service—each job representing the best that Hope executives and engineers have to offer in the way of specialized skill and experience and knowledge of the oil and gas industries.

The Hope Company has never completed a job that it was not proud to point to as an achievement.

HOPE SERVICE

Engineering counsel, design, construction and contracting—in pipe lines for oil and gas, oil pumping stations, gas compressing and boosting plants, gasoline recovery systems, city and inter-city gas mains.

UNIT RESPONSIBILITY

ENGINEERS CONTRACTORS

HOPE Engineering & Supply COMPANY

DESIGNERS MANUFACTURERS

MT. VERNON, OHIO, U. S. A.

A homelike corner in the reception room in the broadcasting station of the Monarch Mfg. Co., at Council Bluffs, Ia.

Installs Program Broadcasting Station To Help Sell Lub Oils

By Ward K. Halbert
N. P. N. Staff Writer

COUNCIL BLUFFS, Nov. 14 RADIO fans of the petroleum industry now may tune in on an "oil station." It is the only big broadcasting station owned and operated by an oil company for the benefit of the business. And here is something else refreshing; the station does comparatively little advertising and talking about itself along with its program. On the other hand it is providing excellent entertainment for its friends and (according to letters from the four corners of the continent) it is worth dialing for at great distances.

The station is K-O-I-L at Council Bluff, Ia. It has 500-watt power and is on the air every evening from 7:30 to 9 and from 11 to 12 o'clock central time on 278 meters. The station belongs to the Monarch Manufacturing Co., compounders and marketers of Mona-Motor oils.

This station may stand alone in the oil industry for quite a while, for it is not every oil company that is situated to do as much with a broadcasting station as the Monarch Manufacturing Co. The firm's operations are anything but local. It has a million gallons of lubricating oil storage at its plant in Council Bluffs and two other big plants in San Francisco and Toledo. The San Francisco branch is known as the Mona-Motor Oil Co. The company handles no fuel oil nor furnace oil and only deals in gasoline when brokering an occasional car for a good lube oil customer.

Monarch's marketing territory is larger, in square miles, than the territory of many of the big Standard companies. But there are no service stations and no billboards nor electric signs such as accompany gasoline merchandising. Selling lube oils lacks the glamour of the gasoline trade and yet, like gasoline, lubricating oil demand must be built up in the mind of the consumer and the goods actually sold through a dealer.

Apparently the present day radio fad is the pass-key to the problem of Monarch Manufacturing Co. H. A. Searle, Sr., secretary and general manager of the company acknowledges that the experiment is yet too young to determine whether it will pay dividends. However the whole management believes in it and the company is going to give it a thorough trial. Briefly, here is the economic theory:

K-O-I-L will broadcast good entertainment nightly. As far as possible the programs are to be popular and pleasant, aimed to hold the ears of the modern American public. Occasionally through the program will be heard the name of Mona-Motor oil, not enough to spoil the program with advertising but enough to make the name "Mona-Motor" look familiar and friendly when the radio fan sees it the next time,

whether on a can or in a dealer's window.

Not only is the station introducing the oil company, but the oil company is doing its part to introduce the station. All of the company's dealers throughout the country are supplied with literature on K-O-I-L, such as weekly programs in advance, to distribute among the motorists. If the dealer is a good salesman at all he can tell them enough to make them try to tune in on K-O-I-L that evening, and when that happens the users of Mona-Motor oil are in ear-shot of the men who make it. Then, if the program pleases, the station is advertised in the usual way from fan to fan.

Mail Shows Interest

As at most good broadcasting stations, mail comes in daily by the sack full from Canada and Mexico, from the Pacific coast and the Atlantic seaboard. For weeks K-O-I-L has gotten more mail that the Monarch Manufacturing Co., but fewer checks in the mail, according to D. A. Searle (Don) advertising manager of the company who also is the big chief up at the studio. For a while an effort was made to answer this mail but that became too burdensome even to attempt. Now the letters are scanned, classified and bundled according to the part of the country they come from. Then they are sent by bundle to the Mona-Motor oil dealer in that neighborhood to answer, by personal contact, letter or telephone call.

By the way, Monarch Manufacturing Co., like so many of the older establishments who pioneered the Independent oil industry, is a family affair. It was started by E. P. Searle, grandfather of Harry and Don who are running the business now under the expert direction of their father, H. A. Searle, Sr. It was on Jan. 15, 1895 that E. P. Searle shipped his first consignment of petroleum products out of Council Bluffs. It was an L. C. L. shipment of Monarch and Sunlight axle grease.

There are officers of the firm who are not Searles, but F. H. Searle of Toledo, O., is president of the company and his brother H. A. Searle Sr., of Council Bluffs previously mentioned is secretary and general manager. The two sons of the general manager are H. A. Searle Jr., (Harry) plant superintendent and D. A. Searle (Don) the advertising manager whose voice is heard most often over K-O-I-L. The vice president of the company is L. W. Kinyon of Minneapolis who went on the road to sell lube oils for this organization 25 years ago. It was then that he acquired the alias of "Greasy Bill" and it still sticks to him, to some extent.

An Ideal Studio

The accompanying picture will give a better idea of the elaborate convenience and luxury of the K-O-I-L studio than a ton of type metal. Be it sufficient to say that the studio was built for a studio and is not an improvised makeshift in the upper rooms of some

FUEL OIL — GAS OIL — KEROSENE — GASOLINE

Coming Through!

Any man able to hop, skip, walk or run can cross an unobstructed field. It takes a mighty good man, though, to "come through" with eleven blood-thirsty enemies rarin' to make a foot-stool out of his neck.

By the same token, it is easy enough to market petroleum products when there's nothing in the way. It is when difficulties like rush delivery or special grades come up that experience and resourcefulness count. It is then that a connection with a marketer like Spencer Petroleum pays its dividends.

Your inquiry entrusted (1) to the telephone company, (2) to a telegraph company or (3) to Uncle Sam's justly celebrated mail service, will reach us in due time and may mean the start of long and pleasant business relations.

"Conscientious Oil Marketing, Guided by Years of Experience"

SPENCER PETROLEUM CO.

All Petroleum Products

STABILITY SPENCER SERVICE OILS SATISFACTION

CHICAGO
1331-1333 Peoples Gas Bldg.
Harrison 9630-1-2-3-4

KANSAS CITY
700 Orear-Leslie Bldg.
Harrison 6180-81
Long Distance 65

WICHITA FALLS
204 City Nat'l Bk. Bldg.
Phone 3480

TULSA
1039 Kennedy Bldg.
7857
Long Distance 37

DETROIT
743 Book Bldg.
Cadillac 8864

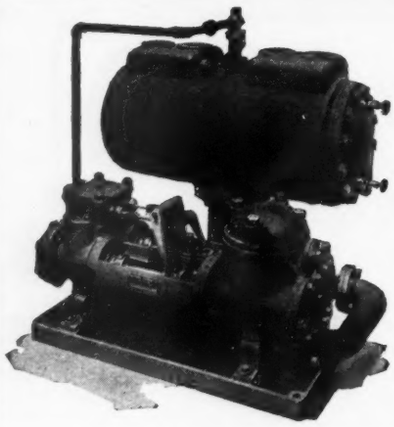
for the OIL INDUSTRY

Direct-acting Pumps
Power Pumps
Rotary Pumps
Centrifugal Pumps
Air Compressors
Oil Meters
Diesel Oil Engines (All Types)
Condensers, jet
Foam Pumps
Gas Compressors
Gas Expanders
Feed-water Heaters
Vacuum Pumps
Slush Pumps
Ammonia Pumps
Ammonia Compressors

WORTHINGTON PUMP AND MACHINERY CORPORATION
115 BROADWAY, NEW YORK CITY — BRANCH OFFICES IN 24 CITIES

WORTHINGTON

6126-1



TRANSIT

Automatic Feed Pumps and Receivers

Automatically return to the boiler the condensed drains of heating systems, steam coils, drying cylinders, steam jackets, etc.

Highest Economy for a Prudent Expenditure

National Transit Pump & Machine Co.

OIL CITY, PA.

WHOLESALE MARKETING · TIDE WATER · DEPARTMENT

A complete source of supply for Jobbers

—the Tide Water Wholesale Marketing Department

NO matter where you are, Tide Water's Wholesale Marketing Department is at your service. This department is a complete source of supply for jobbers. We can supply you with *all* petroleum products. Our facilities also enable us to construct for you a motor oil to your own specifications, which you can market under your own brand name.

Get in touch with us before you buy elsewhere. We are continually in touch with the market—and can always get what you want. Our service is swift and dependable. Write, wire or phone us next time you want quotations or information.

We can supply you with any or all the following products:

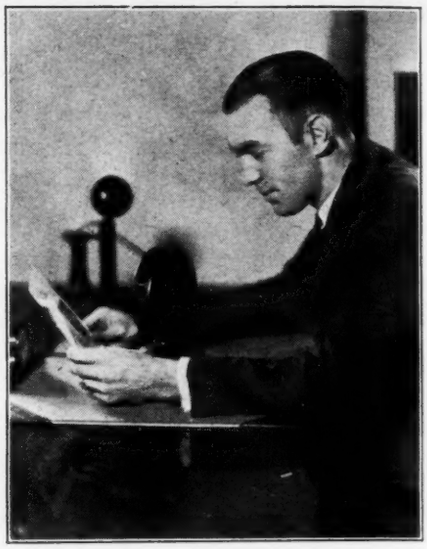
Gasoline
Lubricating Oils
Grease
Petrolatum
Kerosene
Furnace Oil
Wax
Fuel Oil
Cylinder Stocks
Neutrals

For direct shipment from Atlantic Seaboard, Pennsylvania, Mid-Continent and Texas Refineries.

TIDE WATER OIL COMPANY

Wholesale Marketing Department

11 Broadway, New York Phone: Whitehall 6020



H. A. Searle Jr., Chief Engineer and Plant Supt., Monarch Mfg. Co. who will give educational talks from time to time on care and operation of autos, trucks, tractors, etc.

big-town hotel, where a multiplicity of aerials, acres of structural steel and miles of traction lines offer a maximum of resistance. K-O-I-L studio stands on "terra firma" away out in the woods. But it is 300 feet above the surface of the Missouri river, on top of the dizzy elevation that Redskins called Council Bluffs, long before that town or Omaha sprang up on the prairie.

K-O-I-L has a studio room with direct wire connections, in the Fontinelle Hotel in Omaha, but most of the programs are actually staged at the Council Bluffs studio, sitting by the 150-foot towers that can be seen for miles over into Nebraska and up and down the river. The building is of the bungalow type, two stories high, but most of the lower compartments are under ground on three sides which preserves the bungalow effect. The lower floor houses the heating plant and various items of practical equipment, including a kitchen and dining room big enough to seat 50 at a banquet.

Of course the radio broadcasting experiment is not the Monarch Manufacturing Co.'s debut into novelty advertising and merchandising. They have grappled with the problem of popularizing lubricating oil ever since the automobile was supposed to need lubrication. In fact, according to Harry Searle, it was in 1900 that a couple of back-door Oldsmobiles made their appearance in Council Bluffs. No sooner had they once run hot than the Searles had to work out their lubricating problems and Monarch Manufacturing Co. has been in the motor oil business ever since.

There are plenty of refineries in the country no bigger than Monarch's compounding plant. The firm works more than 100 men in the plant, exclusive of the office where the roll runs 25 or 30. The office and warehouse is in one new building, thoroughly modern and designed for its purpose.

Monarch Manufacturing Co.'s machine shop occupies about as much floor

D. A. Searle, General Mgr. of K-O-I-L. The announcer known as "Don" and Gen. Mgr. Monarch Mfg. Co.

space as its warehouse; for in the machine shop the company turns out its own steel barrels, grease pumps, barrel pumps, metal shelving for show rooms and display racks, portable oil cabinets for use at service stations and garages, 100-gallon tanks for underground installation in private garages (made like a 50-gallon drum of double length) all as helps in the merchandising of Mona-Motor oils.

These equipment items have led to others, and finally to a number of novelty sidelines like spark plugs, valve dressing, soap, piston liners, service benches, bench blocks, gasoline cleaning tables for garages, and various other things. Among those which deserve special mention is a grease remover with which old grease is sucked from a motorist's differential. Mona-Motor dealers are instructed to tell automobile owners that "Five pounds of old worn out grease plus three pounds of new grease equals eight pounds of old worn out grease." Thus they take out all the old grease and sell the customer a complete fill, protecting his property and selling more merchandise.

Monarch Manufacturing Co. also has worked out an atomizer for penetrating oil. When a customer's springs have a little squeak that is hard to reach, the garageman can screw a small can of this Mona-Motor specialty on the atomizer, connect it up to the "free air" line and, with the pinch cock lever under his thumb, go right after the hidden "Canary bird" squeak. The Searles have also worked out a chassis lubricant in a cardboard cartridge so arranged that it will fill an Alemite grease gun completely full in one movement. There is also a compressed air bottle for putting gear compound where it belongs with ease and speed.

In the company's laboratory, all lubricants are tested as soon as they are made and a sample held for six months. All materials are sold on weight; every drum that leaves the warehouse passes out across the platform of scales. The most modern loading and unloading machinery is employed at the Monarch plant. Through the pipeline manifold it is possible to pump from a tank car to any one of 76 points of outlet in the plant. Monarch Manufacturing Co. however owns but one tank car. It plys perpetually between Council Bluffs and San Francisco, supplying that branch with Mona-Motor oils, such as it does not compound.

Hammering away consistently is the principle upon which the Monarch Manufacturing Co., has proceeded with its advertising for a number of years. Seldom does the company buy elaborate spreads in publications, nevertheless keeping its products constantly before its trade through the medium of 300 newspapers and 28 farm journals. Besides this newspaper advertising the company publishes two house organs and does a great deal of missionary work by direct mail.

"The Oilmanac" is the publication issued for salesmen and dealers. The other house organ is the "Official Bulletin" which schedules the programs from K-O-I-L broadcasting station two weeks in advance. It is published for consumers, to be reached largely through the agency of dealers. On the day the broadcasting station opened, July 10, 1925, H. A. Searle Sr., delivered the dedicatory address. His talk was published in both of these publications, along with pictures of the studio, both interior and exterior views, and portraits of the men who operate the station.

The station's operating personnel includes R. J. Rockwell, chief operator; Gordon Anderson, assistant operator; and Howard Martin, announcer and program director, besides Don Searle and his brother H. A. Searle, Jr., chief engineer and plant superintendent who delivers a short address occasionally on the operation of motor vehicles and tractors, for the benefit of consumers. He also announces tank wagon price changes in Standard of Indiana and Standard of Nebraska territories for the accomodation of his dealer customers.

Long talks on the qualities of Mona-Motor oils will not be thrust upon the public, company officials all agree. It is the company's purpose to keep K-O-I-L free from the stigma of propaganda. The plan is to make it serve the public's interest primarily, and pay returns to the company by being a sort of friendly "calling card" which every salesman and every dealer has at his disposal. The use of the station has been offered from time to time to various civic organizations including Rotary, Kiwanis and Lion's clubs, and it is open at all times to the police department and county officials for broadcasting information in the interest of public safety, and popular education.

Products that Satisfy

Satisfied Customers are the life of your business— ***and there is nothing that satisfies like real quality, at the right price.***

Humble Products "repeat" because their quality is right. Each one of them—and there is one for each lubrication need—has been carefully designed and prepared, and thoroughly tested to see that it meets the most rigid requirements.

Our line is complete, and our refinery facilities are such that we can take care of your needs at all times — making prompt shipments, in any quantity you may desire—a carload or a shipload—by rail or water, to any point on the globe.

Wire or write for samples and prices.

HUMBLE OIL & REFINING CO. HUMBLE OILS HOUSTON, TEXAS

Humble Oil & Refining Co.

Houston, Texas
"Zero Cold Test Oils"
Producers—Pipe Lines
Refiners — Marketers

FROM COAST TO COAST

INDEPENDENT

OIL

WARNING: The Independent Oil Emblem and the Red Hat Gasoline brand are patented trade-marks—exclusively owned by the Independent Oil Men of America. All unauthorized use will be prosecuted under the law.

Nation Wide Good Will for the Independent Dealer

Back of the organization of the Independent Oil Men of America lies one central idea—to gain nation wide good will for the Independent Oil Man—the torchbearer of free competition in the oil industry.

Through national advertising we are creating public confidence in the Independent and his product. From coast to coast, the true story of Independent Oil is being broadcast to over 18,000,000 motorists. The sign of the Spread Red Eagle has been firmly established in the public mind as a guarantee of dependable petroleum products, no matter where it is displayed.

The sympathy of the motoring public, naturally with the Independent, forms a huge, potential buying power that is crystallized into action by the Spread Red Eagle that you display on your station.

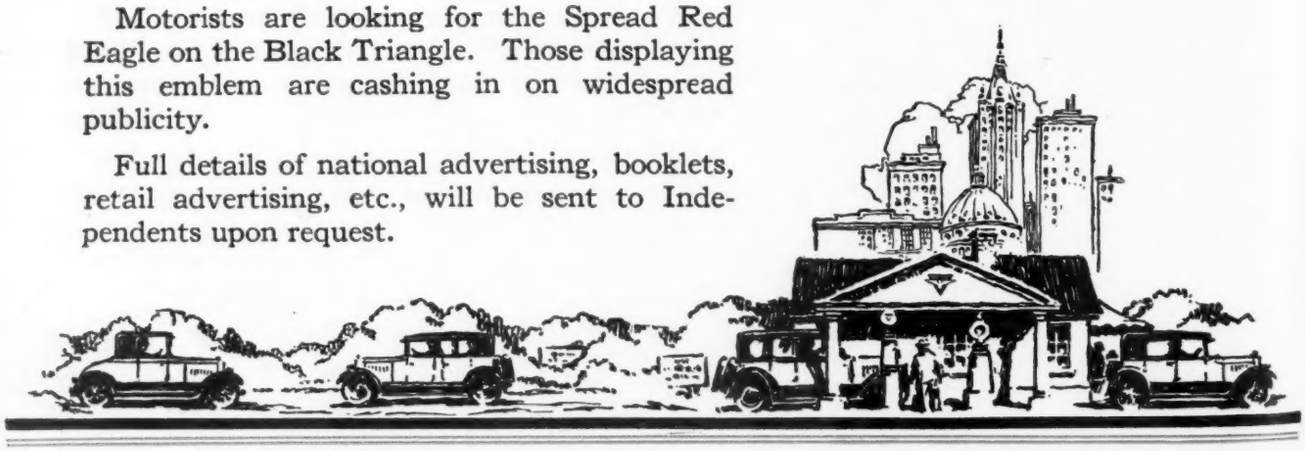
Motorists are looking for the Spread Red Eagle on the Black Triangle. Those displaying this emblem are cashing in on widespread publicity.

Full details of national advertising, booklets, retail advertising, etc., will be sent to Independents upon request.

RED HAT TRADE MARK GASOLINE

RED HAT GASOLINE

In order to use Red Hat trade-mark, you must be a member of both the National Petroleum Marketers Association and the Independent Oil Men of America.



INDEPENDENT OIL MEN OF AMERICA

624 South Michigan Avenue - Chicago, Illinois

HERE AND THERE

Harold R. Deal, western advertising manager at San Francisco for the Tide Water Oil Sales Corp., New York City, has returned to his headquarters at San Francisco after an extended trip which took him across the continent to New York City and over the Pacific coast. Mr. Deal attended the meeting of Tide Water advertising managers at New York which was held recently.

Mr. Deal visited Veedol distributors in the Rocky Mountain states on his way east, including in his visits, J. E. Cronin, president of the Independent Gas & Oil Co., Salt Lake City; A. R. Bruder, vice president and general manager of the Navy Gas & Supply Co. of Wyoming, Cheyenne; Thomas McCusker, vice president and general manager of the Navy Gas & Supply Co., at Denver, Colo.

On his return to the Pacific coast, Mr. Deal attended district meetings of the company at Los Angeles, San Francisco and Portland, at which time the fall sales campaign on Veedol was outlined and discussed.

* * *

W. W. Wright, who was formerly manager of the order and sales promotion department of the Des Moines, Ia. division of the Transcontinental Oil Co., and for the past two years with the sales department of the Ford Motor Co. at Omaha, Neb., has returned to his "first love," the oil industry. Mr. Wright is now editor of the "Sinclair Booster," a house organ and sales promotion magazine which is published by the northwestern division of the Sinclair Refining Co., at Omaha, Neb.

* * *

F. Morris Rowles, western manager at San Francisco for the Tide Water Oil Sales Corp., New York City, who was married on Sept. 24, has been away with Mrs. Rowles on an extended trip in the Pacific northwest, Canada and in the east. While east, Mr. Rowles attended the meeting of Tide Water executives at New York.

* * *

W. P. Gee, superintendent of the Southern Refining Co., San Antonio, Tex., was married on Oct. 21 at San Antonio. Mr. and Mrs. Gee spent several days at Dallas at the fair and seeing the sights, reports R. A. Elmore, assistant superintendent.

* * *

Ralph H. Pape, traveling representative of the comptroller's office of the Transcontinental Oil Co. which recently moved its headquarters from Pittsburgh, Pa., to Tulsa, has also moved along to Tulsa.

J. R. Trolinger, district sales representative at St. Paul, Minn., for Empire Refineries, Inc., has returned from Tulsa where he attended the exposition, and the convention of Empire salesmen.

* * *

J. I. Hornbeck

J. I. Hornbeck, district manager at Boston for the Indian Refining Co., played host recently at a gathering of about 50 distributors' salesmen. The "blowout" was staged at the Westminister Hotel at Boston. Those who attended the banquet included salesmen of Wetmore-Savage Automotive Equipment Co. of Boston distributors of Havoline products in that territory.

E. W. Littlefield, salesmanager for the Wetmore-Savage company, was toastmaster and introduced Mr. Hornbeck, who spoke on his company and its products.

The Havoline franchise has been used in New England for more than a year and has resulted, according to Mr. Hornbeck, in over 125 percent increase in Havoline sales.

* * *

Fred L. King, oil engineer at Los Angeles, Calif., has been taken ill and is at a hospital at Monrovia, Calif.

* * *

Fred J. Foley, formerly manager of the Valvoline Oil Co. business in Maine, has resigned.

Page Toadvin, proprietor of the T. & T. Filling Stations, Salisbury, Md., which handle gasoline and oils of the Standard Oil Co. of New Jersey and of the Tide Water Oil Co., recently returned from a hunting trip in Dismal Swamp, Va. He went along with a party and they pitched camp for a week. They took along with them the prize hounds from the upper eastern shore of Maryland and lower Delaware and anticipated great sport. Game was plentiful but continuous rain spoiled the hunting, except for one day. Mr. Toadvin and his party have planned other trips by automobile to Dismal Swamp in the fall.

* * *

W. C. Pettingell, western sales manager at San Francisco for the Tide Water Oil Sales Corp., New York City, has returned to San Francisco after an extended visit to the Pacific northwest in the interests of his company. Mr. Pettingell took an active part in the quarterly meeting of the sales force of the North Pacific district of the company. The meeting was conducted by Cy. H. Pruner, manager of the north Pacific district.

* * *

J. C. Hoot, who for a number of years was purchasing agent for various subsidiaries of the United States Steel Corp. and for the past seven years director of purchases of the Sinclair Consolidated Oil Corp. has resigned his position with the latter company to become associated with the Alliance Machine Co., Alliance, O., as vice president and assistant treasurer.

* * *

George C. Minter, secretary and treasurer of the St. Joseph Fuel Oil Co., St. Joseph, Mo., recently married Miss Mary Francis Deaver, who was general superintendent of the Methodist Hospital at St. Joseph, according to M. O. Land, president of the St. Joseph Fuel Oil Co.

* * *

James L. Evans, manager at New Castle, Pa. for the Pennzoil Co., was married recently to Miss Mary W. Mitchell at Clearfield, Pa. Mr. and Mrs. Evans went on a wedding trip to Philadelphia and New York.

* * *

L. A. Meyer, of the Park Ave. Service Station, Rutherford, N. J., and Mrs. Meyer recently celebrated their forty-sixth wedding anniversary.

* * *

Stanley A. Joy, salesman at Atlantic City for the Sinclair Refining Co., has been promoted to agent at Camden, N. J.

Refinery Products Directory

Gasoline and Naphtha

ILLINOIS

58-60 U. S. Motor Gasoline
Indian Refining Company, Lawrenceville, Ill.

KANSAS

60-62 420-430 E. P. Gasoline
★Skelly Oil Co., El Dorado, Kansas

64-66 375 E. P. Gasoline
★Skelly Oil Co., El Dorado, Kansas

KENTUCKY

46-48 500 E. P. Naphtha
Great Southern Refining Co., Lexington, Ky.

50-52 450 E. P. Naphtha
Great Southern Refining Co., Lexington, Ky.

56-58 437 E. P. Gasoline
Great Southern Refining Co., Lexington, Ky.

58-60 Navy Gasoline
Great Southern Refining Co., Lexington, Ky.

58-60 Motor Gasoline
Great Southern Refining Co., Lexington, Ky.

64-66 400 E. P. Straight-run Gasoline
Ashland Refining Co., Ashland, Ky.
Great Southern Refining Co., Lexington, Ky.

68-70 Straight-run Gasoline
Ashland Refining Co., Ashland, Ky.

NORTH LOUISIANA

58-60 U. S. Motor Gasoline
Caddo Central Oil & Refining Co., Shreveport, La.
Louisiana Oil Refg. Corp., Shreveport, La.
Shreveport Prod. & Refg. Co., Shreveport, La.

NORTH TEXAS

56-58 450 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

58-60 U. S. Motor Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

58-60 450 E. P. Naphtha
Texhoma Oil & Refg. Co., Wichita Falls, Texas

60-62 400 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

64-66 390 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

64-66 375 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

OKLAHOMA

50-52 450 E. P. Naphtha
Cameron Refg. Co., Ardmore, Okla.

56-58 450 E. P. Gasoline
★Bolene Refg. Co., Enid, Okla.
Cameron Refg. Co., Ardmore, Okla.

58-60 450 E. P. Gasoline
★Bolene Refg. Co., Enid, Okla.

58-60 U. S. Motor Gasoline
★Bolene Refining Co., Enid, Okla.
Cameron Refg. Co., Ardmore, Okla.
Shaffer Oil & Refg. Co., Tulsa, Okla.

60-62 400 E. P. Gasoline
Shaffer Oil & Refg. Co., Tulsa, Okla.

64-66 390 E. P. Gasoline
★Bolene Refg. Co., Enid, Okla.

64-66 375 E. P. Gasoline
Altitude Petroleum Co., Tulsa, Okla.
Shaffer Oil & Refg. Co., Tulsa, Okla.

68-70 350-360 E. P. Gasoline
Shaffer Oil & Refg Co., Tulsa, Okla.

68-70 360-375 E. P. Gasoline
Shaffer Oil & Refg. Co., Tulsa, Okla.

PENNSYLVANIA

50-52 Naphtha
Emery Mfg. Co., Bradford, Pa.

52-54 Naphtha
Lucinda Refining Co., Lucinda, Pa.

54-56 Naphtha
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

58-60 Gasoline
Carnegie Refg. Co., Carnegie, Pa.
★Continental Refining Co., Oil City, Pa.
Independent Refining Co., Oil City, Pa.

58-60 Straight-run Gasoline
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

60-62 Straight-run Gasoline
Bradford Oil Refg. Co., Bradford, Pa.
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

62-64 Straight-run Gasoline
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

64-66 Straight-run Gasoline
Bradford Oil Refg. Co., Bradford, Pa.
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

68-70 Straight-run Gasoline 350 E. P.
McKean County Refining Co., Bradford, Pa

68-70 Straight-run Gasoline 305-320 E. P.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

70-72 Straight-run Gasoline 300-305 E. P.
Emery Mfg. Co., Bradford, Pa.
Lucinda Refining Co., Lucinda, Pa.
★Waverly Oil Works Co., Pittsburgh, Pa.

68-70 Blend, 425-430 E. P.
★Continental Refining Co., Oil City, Pa.

Special Naphtha

OKLAHOMA

V. M. & P. Naphtha
Anderson Prichard Oil Corp., Oklahoma City, Okla.

Cleaners Naphtha
Anderson Prichard Oil Corp., Oklahoma City, Okla.

Rubber Solvent
Anderson Prichard Oil Corp., Oklahoma City, Okla.

Turpentine Substitute
Anderson Prichard Oil Corp., Oklahoma City, Okla.

PENNSYLVANIA

Turpentine Substitute
★Waverly Oil Works Co., Pittsburgh, Pa.

Refineries all over the country are listed according to the products they are making today, or that they have in stock, or will make on reasonable demand.

Refineries shut down for any length of time and whose stocks of products are exhausted, are eliminated so far as possible.

It is requested, in justice to all, that all inquiries by telephone and telegraph be prepaid and this is recommended by the oil associations.

Methods of testing, approved by oil and scientific associations and the U. S. Bureau of Standards, are used. Grades of products listed, as well as names of refineries are revised each week.

Any marketers appearing in these columns are exclusive sales agents by contract with or ownership of refineries and the products listed after them are those made by those refineries.

Natural Gasoline

OKLAHOMA

Grade A
Altitude Petroleum Co., Tulsa, Okla.

Burning Oils

KENTUCKY

43-44 Water White Kerosene
Great Southern Refining Co., Lexington, Ky

43-45 Water White Kerosene
Ashland Refining Co., Ashland, Ky.

NORTH LOUISIANA

41-43 Water White Kerosene
Caddo Central Oil & Refining Co., Shreveport, La.
Louisiana Oil Refg. Corp., Shreveport, La.

NORTH TEXAS

41-43 Water White Kerosene
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

OKLAHOMA

41-43 Water White Kerosene
Cameron Refg. Co., Ardmore, Okla.

42-44 Water White Kerosene
Altitude Petroleum Co., Tulsa, Okla.

44-46 Water White Kerosene
Anderson-Prichard Oil Corp., Oklahoma City, Okla.

PENNSYLVANIA

45 Water White Kerosene
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.
★Continental Refining Co., Oil City, Pa.
Emery Mfg. Co., Bradford, Pa.
★Empire Oil & Grease Co., Inc., Oil City, Pa.
Independent Refining Co., Oil City, Pa.
Lucinda Refining Co., Lucinda, Pa.
McKean County Refining Co., Bradford, Pa.
Mutual Refg. Co., Warren, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

46 Water White Kerosene
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
Mutual Refg. Co., Warren, Pa.

47 Water White Kerosene
★Empire Oil & Grease Co., Inc., Oil City, Pa.

ON THE LAZY BENCH

To the Filling Station Man

By Walt Mason

I drive up for a quart of gas, upon my costly tires; my car of shining tin and brass, such nourishment requires. And blithe young men in spotless white come tripping to my van; their smiles are glad, their eyes are bright, they love their fellowman. They fill the works with sparkling oil, the tank with luscious juice, and they're exulting in their toil, they're glad to be of use. They fill my tires with priceless air, they see the wheels run true, they're dodging around me everywhere, to see what they can do. The young men selling gasoline make life a brighter thing, they have the graces of a queen, they chortle and they sing. If they have grief or carking woe they hide the same away, they smile like Mona as they go about my panting dray. They welcome me, when I draw nigh, as though I were a peer: and when I leave a fond good-bye is ringing in my ear. I burn up all the gas I can to give me an excuse for driving up in my old van and buying up more juice. For I will always spend a yen, and no regret evince, to see a bunch of blithe young men pretend that I'm a prince.

◈ ◈ ◈

A Natural Outcome

Jimson bought a business through an agent as a going concern in first-class condition. After six months he failed, but took his trouble lightly.

Meeting the agent some time later, he said: "Do you remember selling me a business as a going concern?"

"Yes, of course I do," replied the agent.

"Well," said Jimson, "its gone."

—Steel

◈ ◈ ◈

Tulsa, Here I Come!

A Tulsa real estate man leaves this dizzy world and is knocking at the Pearly Gates. St. Peter comes out and asks: "What do you want?" "I want to get in!" St. Peter—"Where are you from?" Answer—"Tulsa, Okla." St. Peter replies: "All right, come in, but you won't like it."

—Pure Oil News

◈ ◈ ◈

Learning Already

Willie—My teacher says the world is round. If I wanted to go east I could get there by going west, then, couldn't I?

His Father—Yes, my son. You'll be a taxi driver when you grow up.

A Tie is a Lose

The big car was speeding toward a railroad crossing when a fast-moving train moved into sight. Immediately the two men in the front seat began an argument as to whether or not they could beat the train.

"Don't get excited!" cried the driver. "I tell you I can easily make it."

"And I tell you y' can't!" shouted the other man. "The train will beat us by minutes."

The driver kept increasing the speed of the car while the argument continued. Finally, the man in the rear seat, who up to this time had remained quiet, frantically clutching the sides of the car, could stand it no longer.

"Well," he shouted, "I don't give a damn who wins this race, but I hope it ain't no tie!"

—Bottles

◈ ◈ ◈

Better Late Than Never

The host was nervous and inexperienced and he rose hurriedly at the conclusion of a song with which one of the guests had been obliging.

"Ladies and gentlemen," he began, "before Mrs. Smith started to sing she—ah—told me her ah—voice was not in the best condition and ah—ah—asked me to apologize for it, but I neglected to do so and—ah—I apologize now."

—The Booster

◈ ◈ ◈

An Optimist

He was on the way to the hospital to visit a sick friend. On the way there, he was badly injured in an auto collision. When the other driver began saying how sorry he was, etc., he answered: "Oh, that's all right. I was going out to the hospital anyhow."

—Flash and Fire

◈ ◈ ◈

Careless!

Restaurant Manager (to orchestra conductor)—"I wish you'd display a little more tact in choosing the music. We've got the National Association of Umbrella Manufacturers here this evening, and you've just played 'It Ain't Gonna Rain No More!'"

—The Booster

◈ ◈ ◈

"Well, Doc, how's your football team coming?"

"Like counterfeit money."

"Whaddye mean?"

"The halves are full of lead and the quarters can't pass."

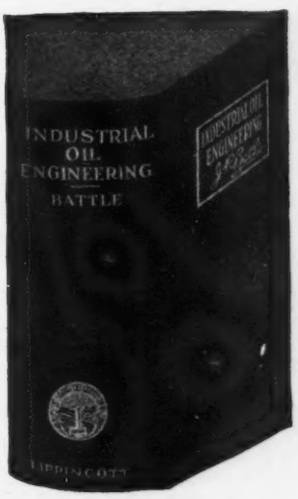
NIAGARA
OIL AND GASOLINE
METERS

ACCURATE!

"For any oil that flows thru a pipe."

Send today for the catalog

BUFFALO METER CO.
Est. 1892
2889 Main St. Buffalo, N. Y.



Over 1,100 pages of practical, concise oil information conveniently arranged. That summarizes INDUSTRIAL OIL ENGINEERING, by J. R. Battle, lubrication expert.

Send your check for $10 now and get a copy of it.

National Petroleum News
813 Caxton Bldg., Cleveland, O.

SINCLAIR OPALINE MOTOR OIL

REG. U.S. PAT. OFF.

YOU have that feeling of satisfaction that comes with doing your neighbor a good turn, when you sell him Sinclair Opaline Motor Oil—You know its performance will bring him back.

Sinclair Opaline Motor Oil *fits the degree of wear* in his engine.

SINCLAIR REFINING COMPANY

NEW YORK
Sinclair Oil Bldg., 45 Nassau St.
Telephone: Rector 9320

CHICAGO
22nd and Rockwell Streets
Telephone: Crawford 2000

Cable Address: "Lucent"

SINCLAIR OILS

REFINERY-TANK WAGON MARKETS

Export Demand for High Gravities Stiffens Gasoline Market

TULSA, Nov. 14

UNUSUAL strength has been displayed by the Mid-Continent refinery market the past week, considering the lateness of the season. Virtually every product offered in the market has been in active demand, with the result that prices have stepped up substantially.

Continued bidding for high gravity gasolines for overseas movement by leading export buyers, and the excellent domestic movement of motor fuels have been strong factors in causing refiners to advance their light oil quotations. Natural gasolines have been the only soft spot in the market and this weakness was largely limited to one grade.

The scarcity of kerosenes which has been apparent for more than a month became more acute this week. Home heating distillates and gas oil likewise were active and strong. Fuel oil demand has been sufficient to push prices up from 2½ to 5 cents per barrel.

Weather conditions in the Mississippi valley and northern states have been an important factor in the gasoline market this week. After the extreme cold weather in October accompanied by rain and snow over virtually the entire distributing territory served by the Mid-Continent, the warm Indian summer days of the first half of November have been welcome to both jobbers and manufacturers because of the resulting increased gallonage.

Sinclair Refining Co. entered the Mid-Continent market again on Friday, Nov. 13, seeking 64-66, 375 end point gasoline for export movement. As this is being written Sinclair is still engaged in canvassing the field and it is impossible to estimate the amount of material which has been bought or which the company hopes to buy.

It is understood that current export buying is on the basis of 12¼ cents per gallon f.o.b. north Texas refining points, which would figure around 12.15 cents for shipment out of Group 3. Quite a number of Oklahoma refiners have received inquiries thus far which would indicate that the quantity sought is rather large, since the favorable freight rate from Texas manufacturing points gives that group the first call on export business.

After the heavy buying of late October and early November for export movement during the current month there was a lull in export demand early this week. The first wave of buying gave Mid-Continent refiners orders totaling in excess of 7,000,000 gallons and it is freely predicted that total export business for the month will probably exceed 10,000,000 gallons. This volume of business on the books cannot help but have a stabilizing effect since it gives refiners an assured outlet for a substantial part of their production which is not obligated on contract to regular customers.

Export demand for high gravity products has caused the price to be advanced on both 60-62, 400 end point and 64-66 for domestic consumption. The going domestic price on 64 today is 12½ cents per gallon and 60-62 is very scarce at 11½ cents per gallon. At the opening of the week 64 could be had at 12 cents and 60 at 11 cents without careful shopping.

Domestic Situation

During the sags in the U. S. Motor market in late October which was caused by bad weather and a continuation of heavy refinery runs, a few jobbers placed substantial orders for gasoline to be delivered over the month of November. One important distributor said today that he bought enough to carry him through the first week of December at the low prices which prevailed at that time.

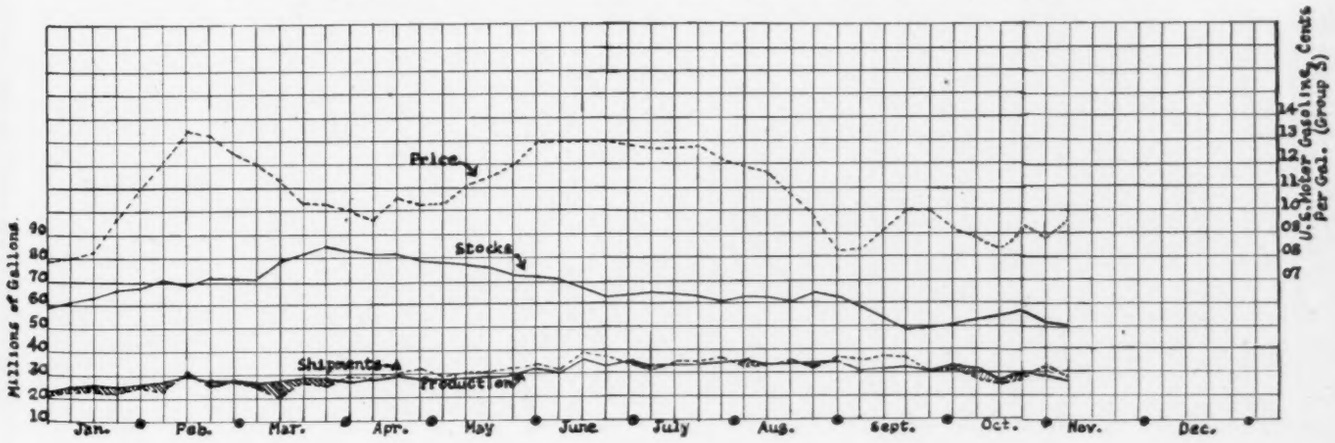
A large percentage of the jobbers, however, were of the opinion that gasoline prices had started on a slide which would take them to a good deal lower levels. Some leaders of the jobbing industry advised hand to mouth buying.

Conversation with a number of jobbers by one refiner this week found a majority of them without more than a working stock of gasoline. Orders have been coming in from these buyers for immediate shipment of goods to meet the demand created by better weather. If weather conditions stay open the last half of the month it appears probable that November shipments from the Mid-Continent will not be far below those of October.

At the opening of the current week 58-60 U. S. Motor gasoline was selling

(Continued on page 84)

Barometer of the Mid-Continent Gasoline Market

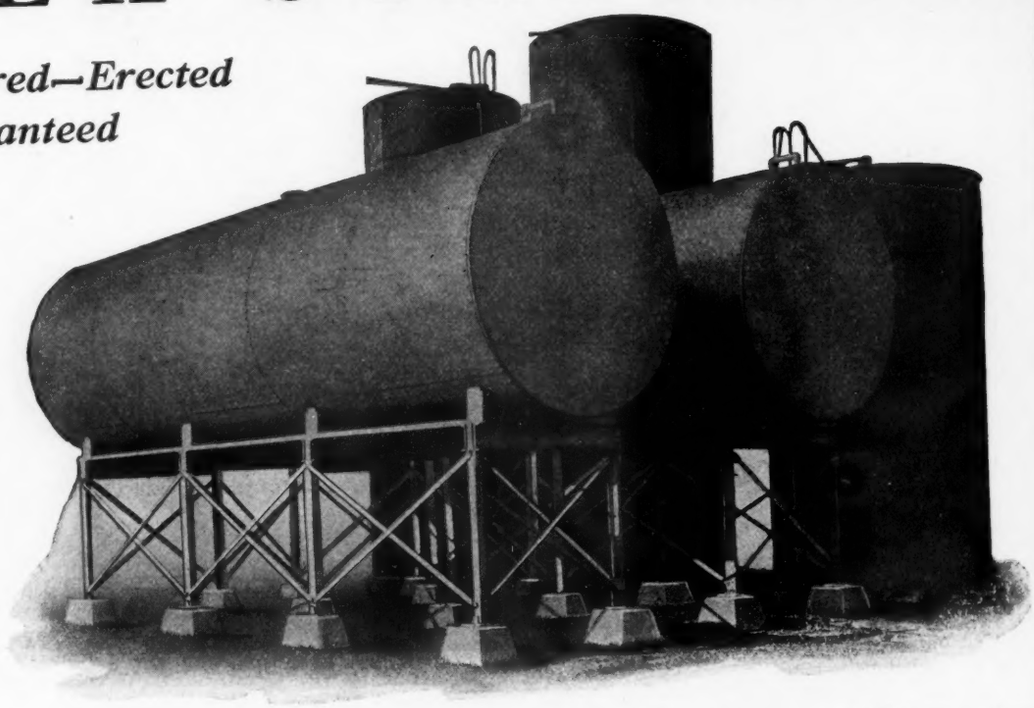


Relation of the Group Three price of U. S. Motor Gasoline to Production, Shipments and Stocks of Gasoline at the 124 Mid-Continent plants reporting their figures weekly to National Petroleum News.

BULK STATIONS

Manufactured—Erected
Guaranteed

Storage Tanks
Rotary Pumps
Steel Supports
Truck Tanks
Vents
Faucets
Valves
Fittings



Send For
Leader Bulletin
No. 100

LEADER IRON WORKS, *Decatur, Illinois*
2112 North Jasper Street

"ST. LOUIS"
Steel Barrels and Wagon Cans

For the Safe Shipment of Oils, Greases, Pastes, Powder, Semi-Liquids, etc.

"Let us help you solve your Container Problems."

Write for information on our New Screw Cover Drums

St. Louis Steel Package Co.
Natural Bridge & Goodfellow
St. Louis, U. S. A.

PETROLEUM
and its Products

WRITE OR WIRE
FOR QUOTATIONS

Marietta, Ohio Refinery
operated on Pennsylvania Crude

Findlay, Ohio Refinery
operated on Ohio Crude

Coffeyville, Kansas Refinery
operated on Midcontinent Crude

The
NATIONAL REFINING Co.
National Headquarters
NATIONAL BLDG.
CLEVELAND OHIO

3 MODERN REFINERIES
COFFEYVILLE, KAN.-FINDLAY, O.
MARIETTA, O.

Refinery Markets on Light Oils and Lubricants

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices Nov. 16	Prices Nov. 9	Prices Nov. 2
52-54 Naphtha	11¼-11½	11¼-11½	11 -11¼
54-56 Naphtha	11½-11¾	11¾-12	11½-11¾
58-60 Gasoline	11¾-12	12 -12¼	11¾-12
60-62 Straight-run gasoline	12¼-12¾	12½-13	12¾-13
62-64 Straight-run gasoline	13¼-14	13½-14	13½-14¼
64-66 Straight-run gasoline	14½-15	14¾-15	14¾-15½
68-70 Straight-run gas. 350-360 E.P.	-16	-16½	-16½
68-70 Straight-run gas. 305-320 E.P.	-19	-19	-19¾
70-72 Straight-run gas. 300-305 E.P.	-20	-20	-21
OKLAHOMA			
48-50 450 E. P. naphtha	8¼- 9	8½- 8¾	8 - 8¼
50-52 450 E. P. naphtha	8¾- 9	8½- 8¾	8 - 8¼
56-58 450 E. P. gasoline	9¼- 9½	8¾- 9	8¼- 8½
56-58 U. S. Motor gasoline	- 9¾	9 - 9¼	8½- 8¾
58-60 U. S. Motor 437 E. P.	-10	9¼- 9½	8¾- 9
60-62 400 E. P. gasoline	11½-11⅝	11 -11¼	-10¾
64-66 375 E. P. gasoline	12¼-12½	12 -12¼	-12
68-70 350-360 E. P. gasoline	13¼-13½	13¼-13½	13 -13½
KANSAS*			
56-58 450 E. P. gasoline	9½- 9¾	8¾- 9	8½- 8¾
58-60 U. S. Motor gasoline	10 -10¼	9¼- 9½	9 - 9¼
60-62 400 E. P. gasoline	11¾-12	11½-11¾	11¼-11½
64-66 375 E. P. gasoline	12¾-13	12½-12¾	12¼-12½
*F. O. B. refinery, Kansas destination.			
NORTH TEXAS			
48-52 450 E. P. naphtha	8½- 8¾	- 8¼	8 - 8¼
56-58 450 E. P. gasoline	- 9¼	8¾- 9	- 8¾
58-60 450 E. P. gasoline	- 9½	9 - 9¼	8¾- 9
58-60 U. S. Motor gasoline	- 9¾	9¼- 9¾	9⅛- 9¼
60-62 400 E. P. gasoline	-11¼	10⅞-11⅛	10½-10⅝
64-66 390 E. P. gasoline	-12¼	-12	11¾-12
64-66 375 E. P. gasoline	-12½	-12¼	12 -12¼
68-70 350-360 E. P. gasoline	-13¼	13¼-13½	13 -13¼
NORTH LOUISIANA			
58-60 U. S. Motor 437 E. P.	10 -10¼	- 9¾	9¼- 9½
ARKANSAS			
58-60 450 E. P. gasoline	9¾-10	- 9½	9 - 9¼
58-60 U. S. Motor gasoline	10 -10¼	- 9¾	9¼- 9½
64-66 375 E. P. gasoline	12½-12¾	12½-12¾	-12¼
CALIFORNIA			
54-56 U. S. Motor gasoline	- 9	- 9	- 9
42-45 Engine distillate, 445-480 E.P.	6¼- 7	6¼- 7	7 - 8

Note: This is without the 2-cent state tax included in the price of California refiners for shipments within the state.

NEW ENGLAND
(F. O. B. Boston and Fall River)

U. S. Motor gasoline	-11¾	-11¾	-12

NATURAL GASOLINE

(Note: End point of all grades, not over 375°F.)

OKLAHOMA			
Grade Double A	11¼-11½	-11½	11½-11¾
Grade A	11¼-11½	-11½	11½-11¾
Grade Double B	10½-10¾	-11	11 -11¼
Grade B	10½-10¾	-11	11 -11¼
Grade C	9 - 9¼	9¾- 9⅞	10¼-10½

NOTE—Specifications adopted by Ass'n of Nat. Gaso. Manufacturers
Grade Double A—80-87.9 gravity, 90% recovery, not over 375 E. P.
Grade A—72-79.9 gravity, 90% recovery, not over 375 E. P.
Grade Double B—84-92 gravity, 85% recovery, not over 375 E. P.
Grade B—76-83.9 gravity, 85% recovery, not over 375 E. P.
Grade C—80-90 gravity, 78% recovery, not over 375 E. P.

NORTH TEXAS			
*Grade Double A	-11½	-11½	11⅝-11¾
*Grade A	-11½	-11½	11⅝-11¾
*Grade Double B	-10¾	-11	11 -11¼
*Grade B	-10¾	-11	11 -11¼
Grade C	9¼- 9½	9½- 9¾	10¼-10½

*F. O. B. Breckenridge.

CALIFORNIA			
73-78 375 E. P.	12½-13½	12½-13	12½-13
PENNSYLVANIA			
68-70 Grav. 437 E. P.	13¼-13¾	13½-14	13¾-14¼
64-66 Grav. 437 E. P.	13 -13½	13¼-13¾	13½-13¾
60-62 Grav. 437 E. P.	12 -12½	12¼-12½	12¾-12½
68-70 Grav. 420 E. P.	13½-14	13¾-14¼	14½-15

BURNING OILS

PENNSYLVANIA			
45 Water White Kerosene	7¼- 7½	- 6¾	- 6¾
46 Water White Kerosene	7¾- 8	- 7¼	- 7¼
47 Water White Kerosene	8 - 8¼	7¾- 8	- 7¾
300 Burning Oil	8 - 8¼	7½- 7¾	- 7½
OKLAHOMA			
41-43 Water White Kerosene	5 - 5⅛	4⅞- 5	4¾- 5
42-44 Water White Kerosene	5½- 5⅝	5¼- 5½	5¼- 5½
KANSAS			
41-43 w. w. kerosene	5¼- 5¾	5¼- 5¾	5¼- 5½
NORTH TEXAS			
41-43 Water White Kerosene	- 5	4⅞- 5	4¾- 4⅞
42-44 Water White Kerosene	- 5¼	- 5¼	5¼

NORTH LOUISIANA	Prices Nov. 16	Prices Nov. 9	Prices Nov. 2
41-43 Water White Kerosene	5¼- 5½	5¼- 5½	5 - 5¼
ARKANSAS			
41-43 Water White Kerosene	- 5½	5¾- 5½	5¼- 5½
CALIFORNIA			
40-42 Water White Kerosene	7½- 8	7¼- 8	7½- 8
NEW ENGLAND			
40-43 Water White Kerosene	- 7	- 7	- 6¾

NEUTRAL OILS

PENNSYLVANIA			
(Viscosity at 70° F.)			
220 Vis. No. 3 Assoc. Filt	-26	-26	-25
200 Vis. No. 3 Assoc. Filt	-23½	-23½	-23
180 Vis. No. 3 Assoc. Filt	-21½	-21½	-21
150 Vis. No. 3 Assoc. Filt	-17½	-17	-17
(Non-Viscous)			
34 Grav. 350-360 Flash	- 7½	- 7½	- 7½
36 Miners Neutrals 300-305 Flash	6½- 6¾	- 6½	- 6½
OKLAHOMA			
(Viscosity at 100°F.)			
100 Vis. No. 2 color	5½- 8	5½- 8	- 5½
100 Vis. No. 2½-3 color	- 8¼	- 8¼	- 8¼
150 Vis. No. 3 color	9 -10	9 -10	9 -10
150 Vis. No. 4 color	- 8¾	- 8¾	- 8¾
180 Vis. No. 3 color	9¾-10¼	9¾-10¼	9¾-10¾
180 Vis. No. 4 color	9½-10½	9½-10½	9½-10¾
180 Vis. No. 5 color	- 9¾	- 9¾	- 9¾
200 Vis. No. 3 color	10¾-11½	10¾-11½	10¾-11¾
200 Vis. No. 4 color	-10½	-10½	-10¾
200 Vis. No. 5 color	9½-10½	9½-10½	9½-10¾
220 Vis. No. 3 color	-11¾	-11¾	11¾-12½
220 Vis. No. 4 color	12 -12¼	12 -12¼	12 -12¼
220 Vis. No. 5 color	-11¾	-11¾	-11¾
240 Vis. No. 3 color	-14	-14	-14
240 Vis. No. 4 color	-13½	-13½	-13½
240 Vis. No. 5 color	-13	-13	-13
280 Vis. No. 3 color	-16	-16	-16
280 Vis. No. 4 color	-15½	-15½	-15½
280 Vis. No. 5 color	-15	-15	-15
300 Vis. No. 5-6 color	17 -17½	17 -17½	-17
GULF COASTAL			
(Viscosity at 100°F; cold test 0)			
100 Vis. No. 2 Color Unfilt. Pale	7½- 8	7½- 8	7½- 8
200 Vis. No. 3 Color Unfilt. Pale	12 -12½	12 -12½	12 -12½
300 Vis. No. 3 Color Unfilt. Pale	13½-14	13½-14	13¾-14
500 Vis. No. 3½ Color Unfilt. Pale	15½-16	15½-16	15¾-16
750 Vis. No. 4 Color Unfilt. Pale	20 -20½	20 -20½	20 -20½
200 Vis. No. 5½ Color Red Oil	10½-11	10½-11	10½-11
300 Vis. No. 5½ Color Red Oil	12½-13	12½-13	12¾-13
500 Vis. No. 6 Color Red Oil	14 -14½	14 -14½	14 -14½
750 Vis. No. 6 Color Red Oil	18 -18½	18 -18½	18 -18½
CALIFORNIA			
(Viscosity at 100°F.)			
100 Vis. No. 2 color	13¾-14½	13½-14½	13¾-14½
100 Vis. No. 3 color	9 -10	9 -10	9 -10
200 Vis. No. 3 color	14½-15½	14½-15½	14½-15½
300 Vis. No. 3 color	14 -16	14 -16	14 -16
450 Vis. No. 3½ color	19½-20½	19½-20½	19½-20½
550 Vis. No. 3 color	21½-22½	21½-22½	21½-22½
600 Vis. No. 3½ color	23½-24½	23½-24½	23½-24½
100 Vis. No. 5 color	8 - 9	8 - 9	8 - 9
200 Vis. No. 5 color	13½-14½	13½-14½	13½-14½
300 Vis. No. 5 color	14 -15	14 -15	14 -15
400 Vis. No. 5 color	16 -17	16 -17	16 -17
500 Vis. No. 5 color	17 -18	17 -18	17 -18
600 Vis. No. 6 color	18 -19	18 -19	18 -19
700 Vis. No. 7 color	19½-20½	19½-20½	19½-20½

CYLINDER STOCKS

OKLAHOMA			
190-210 Vis. at 210° Bright Stock	30 -35	30 -35	30 -35
150-160 Vis. at 210° Bright Stock	27 -31	27 -31	27 -31
600 E Stock, 140-150 Vis. @ 210°	18 -20	18 -20	18 -20
600 Steam Refined Olive Green	8 -10	7½-10	7½-10
600 Steam Refined Dark Green	5¼- 6	5¼- 6	5¼- 6
Black Oil	5 - 5¼	4¾- 5	4¾- 5
PENNSYLVANIA			
(1-inch Immersion Test)			
600 Steam Refined	15½-16	15½-16	15½-16
635 Steam Refined	20 -20½	19 -20	19 -20
650 Steam Refined	22½-23	21 -22	21½-22
600 Flash	25½-26	25½-26	-26
600 Warren E	21¾-22	-22	-22
600 Oil City E	20½-21	-21½	-21½
600 Filtered D	26 -26½	-26½	26½-27½
Cold Test Stocks (bright filtered)	-39	-39	-39
Cold Test Stock (dark filtered)	-37	-37	-37
Black Oil	- 8	- 8	- 8

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher.)

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

WHY?

"DEFIANCE"

INTEGRITY

Buy your barrels at as low a figure as you can, but be sure you are getting full value.

Specifications cover the materials put into a barrel but they do not apply to the men behind the barrel.

Almost anybody can roll up a sheet of steel, weld it together, stamp their initials and the gauge steel on the end and call it a barrel.

But it takes integrity as well as skill to turn out a shipping package like the Defiance Steel Barrel.

You get your money's worth in a Defiance Steel Barrel.

THE AMERICAN STEEL PACKAGE CO.

Defiance, Ohio

Barrel Flanges That Combine Low Cost and High Quality

Made of pressed steel.
Low welding cost. Proper tolerances insure perfect fit of plugs.
Tight Seal.
Flange flush with barrel shell.

Gasket surface smooth and flat.
Made in ¾", 1½" and 2" sizes.
Standard thread as used by all barrel manufacturers.

Write us for prices

THE BETTCHER STAMPING & MFG. COMPANY
CLEVELAND, OHIO

(Continued from page 81)

at 9¼ cents per gallon freely, although leading refiners were then marking up their prices to 9½ cents. The price has strengthened steadily throughout the week until yesterday afternoon, when all the U. S. Motor below 9¾ cents was eliminated from the market and a few sales were being made for next week's delivery at 10 cents per gallon.

Crude Market Tight

Crude is tight throughout the Mid-Continent, with the result that refiners are holding on to all present connections tenaciously and in some instances bidding for additional oil. One refiner in the Wichita Falls area in north Texas is reported to be offering a premium of 25 cents per barrel for new crude. In Oklahoma some refiners report a tendency on the part of producers to ask for a premium.

Refiners generally have come to the conclusion that it is a good investment to store crude at present prices. That is one important reason why manufacturers are restricting their rate of manufacture to the level of new demand. A study of the current reports gathered by National Petroleum News from 124 plants in the Mid-Continent shows that refiners have been cutting their runs sharply very soon after it became apparent that demand had slacked off. The compilation for the week ending Nov. 6 showed runs to be 24,988 barrels per day less than the final week of October and 58,000 barrels per day less than in the first week of October.

An example of the attitude of refiners is seen in the action this week of the Pure Oil Co. in closing down its refinery at Cushing.

With complete current statistical information regarding the rate of manufacture of principal commodities and the rate of shipment, refiners are now in a position to regulate their scale of operations in such a sane manner that markets need not drop so quickly or as far below the cost of production as in earlier years. It is generally predicted that Mid-Continent Independents will not build up their present stocks of gasoline appreciably before the first of the year and that accumulation will be limited by adjustment of the rate of production to the first four months of 1926.

Natural Gasoline

Shipment of high gravity export gasoline on recent orders are just now getting well under way and the first effects are beginning to be felt in a small way by manufacturers of natural gasoline. In order to get a fair volume of 64-66, 375 end point gasoline out of their crude refiners are forced to use rather large quantities of natural gasoline in working up their export orders.

The demand is very largely for high recovery products such as Grade A and Double A, with the result that these commodities are bringing a much higher price than Grade B and particularly

Refinery Markets on Wax and Heavy Oil Products

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

WAX

PENNSYLVANIA	Prices Nov. 16	Prices Nov. 9	Prices Nov. 2
	(Per Pound New York)		
122-124 White Crude Scale..	– 5¾	– 5¾	– 5¾
124-126 White Crude Scale..	– 6	– 5⅞	– 5⅞
OKLAHOMA			
	(Per Pound Group 3)		
124-126 White Crude Scale..	5⅜– 5½	5⅜– 5½	5⅜– 5½
CALIFORNIA			
White Crude Scale.....	7½– 8	7½– 8	7½– 8

(San Joaquin Valley, San Francisco 4c per bbl. more.)

FUEL OIL

PENNSYLVANIA			
36-40 Fuel Oil.....	– 5¾	5½– 5¾	5½– 5¾
30-34 Fuel Oil.....	– 5½	5¼– 5½	– 5¼
28-30 Fuel Oil.....	– 5¼	5 – 5¼	– 5
OKLAHOMA			
38-40 Straw distillate.....	4 – 4⅛	3⅞– 4⅛	3⅞– 4
36-38 Straw distillate.....	– 3⅞	3¾– 3⅞	3⅝– 3¾
32-36 Gas oil.....	3½– 3¾	3⅜– 3½	3¼– 3½
26-30 Fuel oil (Bbl.).....	1.27½–1.30	1.25 –1.27½	1.15 –1.17½
24-26 Fuel oil (Bbl.).....	–1.25	1.20 –1.22½	1.12½–1.15
18-22 Fuel oil (Bbl.).....	1.17½–1.20	1.15 –1.20	–1.10
KANSAS*			
38-40 Light straw distillate..	4⅛– 4¼	4⅛– 4¼	4 – 4¼
36-38 Light straw distillate..	– 4	– 4	3⅞– 4
32-36 gas oil.....	3¾– 3⅞	3½– 3¾	– 3½
24-26 Fuel oil.....1.30	–1.35	1.25 –1.30	1.20 –1.25
26-30 Fuel oil.....1.35	–1.37½	–1.30	1.25 –1.30

*F. O. B. refinery, Kansas destination.

NORTH TEXAS	Prices Nov. 16	Prices Nov. 9	Prices Nov. 2
36-40 Straw Distillate.....	3¾– 4	3⅝– 3⅞	3⅜– 3⅝
32-36 Gas Oil (Gal.).....	3⅜– 3½	3⅜– 3½	3¼– 3⅜
24-26 Fuel, per bbl.....1.27½–1.30		1.25 –1.30	1.25 –1.30
GULF COASTAL			
Fuel.....1.45	–1.50	1.45 –1.50	1.45 –1.50
Gas Oil.....	4½– 4¾	4½– 4¾	4½– 4⅜
NORTH LOUISIANA			
32-36 Light Gas Oil (Gal.)...	– 3¾	– 3½	– 3½
18-22 Fuel Oil (Bbl.).....1.00	–1.05	1.00 –1.05	1.00 –1.05
ARKANSAS			
32-36 Gas Oil.....	– 3¾	– 3½	3½– 3⅜
CALIFORNIA*			
14-18 Fuel Oil (Bbl.).....1.00		1.00	1.00
14-18 Bunker Oil (Bbl.).....1.00		1.00	1.00
24-30 Gas Oil (Bbl.).....1.15		1.15	1.15
27 + Diesel Oil (Bbl.).....1.15		1.15	1.15

*Prices at southern California points. Prices at San Francisco and other coast points 5c per bbl. higher. San Joaquin Valley 10c per bbl. less.

NEW ENGLAND (F. O. B. Boston and Fall River)			
30-32 gas oil (gal.).....	– 5¾	– 5¼	– 5¼
Fuel Oil (Bunker C) bbl.....	–1.67	–1.67	–1.67

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

Grade C. At the same time the production of Grade C is largely increased at this time of the year on account of the cool weather. A surplus of Grade C has been apparent on the market since the beginning of the month, with the result that the price has dropped down below the level of U. S. Motor.

At around 9¼ cents per gallon Grade C is over 2 cents per gallon below Grade A, while at the beginning of the month there was a differential of only a half cent per gallon. At the opening of October all grades of natural gasoline commanded the same price. While refiners blend largely for gravity, they are more and more demanding a stable product with a high recovery which will not cause them to take an excessive blending and shipping loss.

Burning Oils

More and more refiners are abandoning the making of kerosene. One of the largest Independents in the state with its own system of stations is buying kerosene on the outside rather than manufacture it. This trend in practice caused by more efficient fractionation is one important reason why burning oils are commanding a price of 5 cents per gallon and above. The consumer who demands a 42-44 grade of kerosene is now limited to only a few sources of supply and must pay a premium of at least a half cent per gallon over 41-43.

There is no apparent scarcity of home heating distillates, as there is in the case of kerosene, but refiners are enjoying a good business and are keeping their prices well up around 4 cents per gallon. The current tendency is to ask a fraction over 4 cents per gallon, particularly for the distillates of lighter than a straw color.

Northern buyers of gas oil have been active in searching for zero cold test material with the result that some sales have been made at as high as 4 cents per gallon. Higher cold test gas oil can be found at 3¾ cents per gallon with possibly a few odd cars at an eighth below that figure.

Fuel Oil Strong

Demand for fuel oil has been increasing steadily for more than a month at the same time that production has been declining. During the four weeks ending Nov. 6 the 124 refineries referred to above reduced their stocks of gas and fuel oil nearly 15,000,000 gallons. If runs are kept down during the coming winter months as may be expected it appears that heavy oil stocks will be worked down much lower than they are today.

Fuel oil is moving further east than usual from the Mid-Continent as a result of the coal strike. One refiner today sold a solid train load of 24-26 fuel oil for Ohio delivery at $1.25 per barrel. Other refiners are moving fuel into territory even farther east than Ohio at advancing prices.

Low gravity 18-22 fuel oil is bringing $1.17½ to $1.20 per barrel on today's market and 26-30 fuel is selling at as high as $1.30 per barrel.

Two refiners who have been selling 600 steam refined oil at 7½ cents per gallon advanced their price to 8 cents during the past week as a result of better demand for that class of oils. Neutrals are well held at current list prices and bright stocks are strong.

All prices and market information printed herein have been gathered by the staff of National Petroleum News from reliable sources and so far as can be ascertained thoroughly represent the going market as defined for each product on the date given for those particular prices. Both buyers and sellers have been checked in the gathering of this information and actual sales studied.

These prices and this information are subject at all times to correction for errors. Anyone having knowledge of any facts which would indicate anything different from the information which is given, is especially urged to send in those facts to the head office of National Petroleum News at once, or take them up with the nearest representative. All such facts will be promptly and thoroughly investigated.

The staff of National Petroleum News is cognizant of the fact that this market information has come to have a high standing in the industry. It wants to not only maintain that standing, but to improve it and to that end, invites the co-operation of the entire oil industry.

Gasoline Bull Movement Holding Other Products Firm

CHICAGO, Nov. 14.—The bull movement of last week continues. Apparently, at this time one week ago, demand did not justify the upward trend of the market. This week, however, the demand has been better. This is partly due, no doubt, to the pleasant fall weather, but attributable also to the natural tendency of any trader to get into a rising market.

Although there is no way to account for it positively, other than that the weather has been better this week than last, the volume of gasoline moved through the Chicago resale market has shown improvement and the price of U. S. Motor material has advanced from a maximum of 9½ cents to an arbitrary figure of 10 cents. Almost unanimously, at the close of this week, refinery representatives in the Chicago market were quoting Motor at 10 cents to the trade and the accepted going figure was not much less than that.

Kerosene has held firm over the week with a tendency to advance. The actual increase in price has been only a shade but most of the strength has been shown in the better materials. At present 5½ to 5¾ cents is considered the going price for 42-44 gravity, water white. Inferior products can be bought as low as 5¼ in some quarters but the keenest demand is for the better material.

Furnace oil is firm at 4 to 4¼ cents a gallon, but there has been no marked tendency to strengthen on demand over the week, in spite of the fact that the product is highly seasonable. Current quotations were in effect last week at this time and no lower ones are anticipated, but it is believed that a spell of really severe weather will be necessary to bull the market.

Heavier ends than distillate for domestic use have strengthened materially over the week. Gas oil, now the most popular fuel for small establishments, has increased from a minimum of 3½ cents last week to a firm 3¾ cents now. And in a like manner 24-26 fuel oil has increased in price from $1.25 to $1.30 and the upward movement appears only to have started, for 18-22 fuel is moving fairly well at $1.20 to $1.25 and Smackover crude fuel continues to be quoted at $1.10 to the trade. Smackover is not any stronger than it was last week, however, and some dealers report hearing quotations down as low as $1.05 a barrel.

Next week promises nothing exceptional in the way of weather for gasoline consumption, but rather bullish weather for the several grades of oil fuels on the market, according to the official statement of the weather man on Saturday. The first of next week will be cooler than normal but seasonable temperatures will prevail toward the middle and last of the week, accompanied by rain.

Benzol Stocks Are Small

By Special Correspondent

NEW YORK, Nov. 16.—Local distributors report a much improved export inquiry for motor benzol, although they are not in a position, as yet, to take care of foreign requirements. Stocks on hand are still small, and jobbers have virtually nothing to offer.

In tanks at the ovens, motor benzol is still quoted at 23 cents a gallon. Consumption is dropping, reflecting the slump in the demand from the motoring public but is still large for this time of the year. Production is slowly gaining and while some observers are predicting slightly lower prices next month, others say they see no indications of a decline. Pure benzol demand is good while 90 per cent is moving more freely.

PLATT'S
OILGRAM
Petroleum Markets-Every Day

ATTENTION—
Buyers and Sellers of Petroleum Products!

Last month a railroad in the southwest was hauling shipment of natural gasoline of which several cars were lost in a wreck.

In arriving at a basis for settlement of the damage, the manufacturer was willing to accept the prices quoted in the OILGRAM. The railroad after an investigation agreed, and the claim is now being adjusted on prices in the OILGRAM.

More and more executives are finding Platt's Oilgram—with its daily accurate survey of petroleum markets — indispensable. More contracts are being written based on its daily quotations of refined products.

Platt's Oilgram will keep YOU in daily touch with changing markets—crude, refined, tank wagon and export.

Order your service from the nearest mailing point. 3 months for $25, 12 months for $75.

TULSA—608 Bank of Commerce Bldg.
CHICAGO—360 N. Michigan Ave.
CLEVELAND—819 Caxton Bldg.

Week's Price Changes Tank Wagon Market

Gasoline Changes

Standard of Indiana—T.w. and s.s. advanced 2 cents, Kansas City, to 17.9 cents and 19.9 cents respectively **Nov. 10.**

Canadian—S.s. price only reduced 4 cents at Cochrane, Ont., to 35 cents, **Nov. 12.**

Kerosene Changes

Magnolia Petroleum—Advanced ½ cent, Texarkana, to 12.5 cents, Nov. 14.

Casinghead Is Stronger In California

LOS ANGELES, Nov. 13.—More casinghead gasoline has been selling around 13½ cents this week than last and the demand is strong. There is little of this product in the spot market. Almost all of it is now under contract. Long time contracts are being written at 13 cents and some recent short term contracts have been at as high as 14 cents. This is the best price casinghead gasoline has brought in recent years.

The gasoline price war between the big companies has extended beyond the Los Angeles territory. Cut price signs have appeared in San Francisco, the cuts being ½ to 1 cent below the Standard's service station price. In almost all instances it has proved to be a case of the Independent service station man giving part of his 4-cent differential.

The present price schedule on both crude and refined oils is hurting the small refiners. With six previously reported as shut down there is a likelihood of two or three more closing any day.

There have been no other material changes in the Los Angeles market. Volume of movement remains about the same. Continued good weather is helping to keep up the domestic gasoline demand.

Pennsylvania Market Advancing

Refiners throughout the Pennsylvania field are very optimistic in regard to conditions as existing and what is to be expected in the future. The general tone of the market is one of buoyancy and with the limited supply on hand together with the quantity of orders to be filled the general conditions have assumed a steady, advancing nature leading toward higher levels.

Kerosene has been advancing steadily during the past week and the latest quotations are nearing the 7½ cent range. Burning oil and fuel oils are moving in accordance. The gasolines and blend stocks are enjoying a steady market. Naphtha took a slight dip during the week but seems to have regained its former level. Wax is becoming more scarce each day. Some refiners report they are unable to furnish wax in any great quantities. Neutral and cylinder stocks are holding firm.

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

BELOW are given in cents a gallon, the tank wagon price of gasoline without the special taxes levied against motor fuels by many states, the amount of the state taxes, the total tank wagon price, with tax added in and the service station or retail price of gasoline as quoted by the Standard Oil Companies in their various marketing territories. The right hand column is the tank wagon price of kerosene. By tank wagon price is meant the price to resale agents or dealers.

These Prices in Effect November 16, 1925

S. O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Atlantic City, N. J.	15	0	15	*	13
Newark, N. J.	15	0	15	17	13
Annapolis, Md.	15	2	17	*	12.5
Baltimore, Md.	15	2	17	20	10
Cumberland, Md.	15	2	17	20	12.5
Washington D. C.	15	2	17	20	11.5
Danville, Va.	15	3	18	*	13.5
Norfolk, Va.	15	3	18	21	13.5
Richmond, Va.	15	3	18	21	13.5
Roanoke, Va.	15	3	18	21	13.5
Petersburg, Va.	15	3	18	*	13.5
Williamsburg, Va.	15	3	18	*	13.5
Charleston, W. Va.	15	3½	18.5	21.5	13.5
Clarksburg, W. Va.	15	3½	18.5	21.5	13.5
Keyser, W. Va.	15	3½	18.5	*	13.5
Parkersburg, W. Va.	15	3½	18.5	21.5	13.5
Wheeling, W. Va.	15	3½	18.5	21.5	13.5
Charlotte, N. C.	15	4	19	22	13
Hickory, N. C.	15	4	19	*	13
High Point, N. C.	15	4	19	*	13
Mt. Airy, N.C.	15	4	19	*	13
Salisbury, N. C.	15	4	19	*	13
Charleston, S. C.	15	5	20	23	13.5
Columbia, S. C.	15	5	20	23	13.5

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

*New York City	17	0	17	21	14
Albany, N. Y.	†18	0	†18	†20	14
Buffalo, N. Y.	14	0	14	17	14
Rochester, N. Y.	†14	0	†14	†18	14
Syracuse, N. Y.	16	0	16	18	13
Boston, Mass.	16	0	16	20	12
Augusta, Me.	16	3	19	22	14
Manchester, N. H.	16	2	18	22	14
Burlington, Vt.	16	2	18	21.5	14

*In steel barrels.
†At Rochester and Albany, Standard sells two grades of gasoline, the above price applying to its Socony grade, and another grade being sold 2c below this price.

ATLANTIC REFINING

Pittsburgh, Pa.	17	0	17	*22	14
Philadelphia, Pa.	17	0	17	*22	14
Allentown, Pa.	17	0	17	*22	14
Erie, Pa.	17	0	17	*22	14
Scranton, Pa.	17	0	17	*22	14
Altoona, Pa.	17	0	17	*22	14
Dover, Del.	17	2	19	22	14
Wilmington, Del.	17	2	19	22	14
Providence, R. I.	16	1	17	20	13
Springfield, Mass.	16	0	16	19	13
Worcester, Mass.	16	0	16	19	13
Hartford, Conn.	16	2	18	21	12
New Haven, Conn.	16	2	18	21	13
Boston, Mass.	16	0	16	19	13

*Contains 2-cent tax collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	15	3	18	21	14
Louisville, Ky.	17	3	20	23	12
Covington, Ky.	16	3	19	22	14
Clarksdale, Miss.	16	3	19	22	12
Jackson, Miss.	16	3	19	22	11
Natchez, Miss.	15.5	3	18.5	21.5	11.5
Vicksburg, Miss.	15.5	3	18.5	21.5	11.5
Birmingham, Ala.	17	2	19	22	14.5
Mobile, Ala.	16	2	18	21	11
Montgomery, Ala*	18	2	20	23	15.5
Atlanta, Ga.	17.5	3½	21	24	13
Augusta, Ga.	18.5	3½	22	25	14.5
Macon, Ga.	18.5	3½	22	25	13.5
Savannah, Ga.	13.5	3½	17	20	13
Jacksonville, Fla.	16	4	20	23	13
Miami, Fla.	18	4	22	25	14.5
Tampa, Fla.	16	4	20	23	13
Pensacola, Fla.	16	4	20	23	13.5

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

S. O. INDIANA

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Chicago, Ill.	†16	0	†16	18	11
Decatur, Ill.	11	0	11	13	11.5
E. St. Louis, Ill.	15.1	0	15.1	17.35	10.6
Joliet, Ill.	16.4	0	16.4	18.4	11.7
Peoria, Ill.	10.5	0	10.5	12.5	11.5
Quincy, Ill.	16.2	0	16.2	18.2	11.3
Indianapolis, Ind.	16.2	3	19.2	21.2	11.7
Evansville, Ind.	15	3	18	20	11.5
South Bend, Ind.	16.4	3	19.4	21.4	11.9
Detroit, Mich.	16.8	2	18.8	20.8	12.2
Grand Rapids, Mich.	16.7	2	18.7	20.7	12.1
Saginaw, Mich.	16.9	2	18.9	20.9	12.3
Madison, Wis.	16.3	2	18.3	20.3	11.5
Milwaukee, Wis.	16.1	2	18.1	20.1	11.3
La Crosse, Wis.	17.2	2	19.2	21.2	12.4
Minneapolis, Minn.	13.2	2	15.2	17.2	12.6
Duluth, Minn.	13.5	2	15.5	17.5	12.6
Mankato, Minn.	17.1	2	19.1	21.1	12.4
Des Moines, Iowa	13.5	2	15.5	17.5	11.9
Davenport, Iowa	16.5	2	18.5	20.5	11.9
Sioux City, Iowa	16	2	18	20	11.5
Mason City, Ia.	16.5	2	18.5	20.5	11.9
St. Louis, Mo.	**15.6	2	17.6	19.9	11
Kansas City, Mo.	††15.9	2	17.9	19.9	7.3
St. Joseph, Mo.	**16	2	18	20	10.9
Fargo, N. D.	18.9	1	19.9	21.9	14.6
Grand Forks, N. D.	19.2	1	20.2	22.2	14.9
Minot, N. D.	18.9	1	19.9	21.9	14.6
Pierre, S. D.	18	3	21	*	13.1
Huron, S. D.	13	3	16	18	13.1
Wichita, Kans.	8.8	2	10.8	12.8	10.8
Bartlesville, Okla.	13.9	3	16.9	18.9	9.9

†Dumps of 100 or more gallons at 15c per gallon.
*S. O. Indiana does not operate station.
**Includes city tax of ½c.
††Includes city tax of 1c.

S. O. NEBRASKA

Crawford, Neb.	17	2	19	*	12.25
Omaha, Neb.	10	2	12	14	11.5
McCook	17.75	2	19.75	21.75	13
Norfolk	16.75	2	18.75	20.75	12
North Platte	17.75	2	19.75	21.75	12.75
Scotts Bluff	17.25	2	19.25	21.25	12.25

*Standard has no service station here.

CONTINENTAL OIL

Denver, Colo.	16	2	18	20	14.5
Pueblo, Colo.	16	2	18	20	14.5
Casper, Wyo.	17	2½	19.5	21.5	13
Cheyenne, Wyo.	17	2½	19.5	21.5	14.5
Butte, Mont.	19	2	21	21	16
Helena, Mont.	21	2	23	25	17
Salt Lake City, Utah	18.5	3½	22	24	18
Boise, Ida.	20	3	23	25	20
Albuquerque, N.M.	20.5	3	23.5	26.5	16.5

S. O. CALIFORNIA

Phoenix, Aris.	20	3	23	26	21.5
Los Angeles, Cal.	10.5	2	12.5	16.5	15.5
Fresno, Cal.	14.5	2	16.5	20.5	17.5
San Francisco, Cal.	14	2	16	20	15.5
Reno, Nev.	17.5	4	21.5	25.5	19
Portland, Ore.	14	3	17	21	16.5
Seattle, Wash.	14	2	16	20	16.5
Spokane, Wash.	18	2	20	24	20.5
Tacoma, Wash.	14	2	16	20	16.5

S. O. LOUISIANA

Little Rock, Ark.	12.5	4	16.5	19.5	10.5
Alexandria, La.	13	2	15	18	11.5
Baton Rouge, La.	12	2	14	17	10
Lake Charles, La.	13.5	2	15.5	18.5	11.5
New Orleans, La.	*13.5	2	15.5	18.5	10.5
Shreveport, La.	12	2	14	17	10.5
Lafayette, La.	13	2	15	18	11
Bristol, Tenn.	13.5	3	16.5	19.5	13
Chattanooga, Tenn.	12	3	15	18	13
Knoxville, Tenn.	13	3	16	19	13.5
Nashville, Tenn.	12	3	15	18	13
Memphis, Tenn.	10.5	3	13.5	16.5	12.5

*Includes 1c city tax on gasoline and kerosene.

S. O. OHIO

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
All Ohio points	16	2	18	20	13

MAGNOLIA PETROLEUM

Muskogee, Okla.	14	3	17	20	11
Oklahoma City	14	3	17	20	12
Tulsa, Okla.	14	3	17	20	11
Fort Smith, Ark.	14	4	18	21	11
Little Rock, Ark.	12.5	4	16.5	19.5	10
Texarkana, Ark*	15	4	19	23	12.5
Dallas, Tex.	16	1	17	19	11
El Paso, Tex.	17	1	18	19	13
Fort Worth, Tex.	13	1	14	16	10
Houston, Tex.	16	1	17	19	12
San Antonio, Tex.	12	1	13	15	10

*Within city of Texarkana, Ark., the state tax on gasoline is 1c per gal. conforming with the Texas state tax. In Texarkana district outside of the city the 4c state tax applies.

V. M. & P. NAPHTHA

Changes ordinarily occur coincident with gasoline)	Oleum Spirits	V.M.& P. Naphtha	Cleaners Naphtha
Chicago	18	20	20
Detroit	20.2	21.7	21.7
Kansas City	18.2	20.2	23.2
Milwaukee	18.2	22.7*	22.7*
Minneapolis	19.5	24*	24*
St. Louis	17.4	19.9	21.2
New York		19	.....

*Including state tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Toronto	23.5	3	26.5	30	20
Ottawa	24.5	3	27.5	31	21
Cochrane	28.5	3	31.5	35	24.5
Ft. William	27.5	3	30.5	34	22.5

MANITOBA

Winnipeg	27.5	3	30.5	34	22.5

SASKATCHEWAN

Regina	30.5	0	30.5	34	25.5

ALBERTA

Edmonton	30.5	2	32.5	36	27.5
Calgary	29.5	2	31.5	35	25.5

BRITISH COLUMBIA

Vancouver	21	3	24	28	23

QUEBEC

Montreal	23.5	3	26.5	30	20
Quebec City	25.5	3	28.5	31	22
Three Rivers	25.5	3	28.5	32	22

NEW BRUNSWICK

St. John	26.5	0	26.5	30	25
Moncton	26.5	0	26.5	30	25

NOVA SCOTIA

Halifax	26.5	0	26.5	30	23
Sydney	28.5	0	28.5	32	25

PRINCE EDWARD ISLAND

Charlottetown	26.5	2	28.5	33	23

Note: In districts surrounding these points 1c additional is added to city price.

Complete Export Markets

New York Gulf Coast California

Export Market Generally Firm at New York and Gulf Ports

By Special Correspondent
NEW YORK, Nov. 14

FEATURING the petroleum situation was the upward swing in gasoline prices last week. Both domestic and export quotations showed substantial gains. Local refiners have advanced U. S. Motor from 11 to 11¼ cents a gallon. Recent heavy buying in Group 3 by exporters is held largely responsible for the strength in gasoline.

European buyers are now anticipating their spring requirements. Two cargo inquiries for January-February shipment were reported, by Gulf refiners. There is a much firmer tone to 64-66 gravity gasoline, owing to the scarcity of offerings in Group 3.

Reports current in New York export market indicate that at least one refiner has sold bunker oil, grade C, below $1.65 a barrel. Diesel oil has been reduced to $1.99½ a barrel.

The local export market for gasoline, is decidedly more lively than a week ago although cargo sales are still scarce. Leading refiners are quoting U. S. Motor at 11 to 11¼ cents a gallon, refinery, although persistent reports are that 10¾ cents can still be done in some cases. There was an inquiry from a continental buyer for 45,000 barrels of U. S. Motor, 64 gravity and prime and water white kerosene for January shipment, and one of the leading refiners expects to close this shortly. Cased gasoline demand has improved a little, although the prices are unchanged. A Japanese buyer is reported to have purchased 45,000 cases for delivery over the remainder of the year.

Export Gasoline—Gulf Ports

At the Gulf ports gasoline was decidedly stronger. One of the leading refiners sold a cargo of gasoline and kerosene mixed for the last half of December delivery to France. This sale, which included 50,000 barrels, was reported made at 13½ for 64 gravity; 10½ for U. S. Motor; 6 cents for prime and 7 cents for water white kerosene.

As the week closed, U. S. Motor was generally quoted from 10¾ to 11 cents while 64 gravity ranged from 13½ to 14¼ cents. For a cargo of straight 64, refiners were demanding 14½ cents, but in a mixed cargo with U. S. Motor and prime and water white kerosene 13½ cents could have been done. The Group 3 market for 64-gravity gasoline has been strengthening steadily, and refiners are very reluctant sellers. A leading Independent refiner is reported to have sold a cargo of 45,000 barrels, of U. S. Motor 64-gravity, and prime and water white kerosene at 10½ cents for motor 14 cents for 64 gravity and 6 and 7 cents for prime and water white kerosene, January shipment to the United Kingdom. Cased gasoline demand was lighter and U. S. Motor was still held at $2.25 a case while 64 was unchanged at $2.55 a case.

Domestic Gasoline—New York

Locally, the jobbing demand for U. S. Motor gasoline is much improved and sellers are asking 11 to 11¼ cents a gallon, refinery and 12 to 12¼ cents a gallon, delivered, to the trade. Consumption is still heavy regardless of the cold weather. The local price in steel barrels to garages is fairly well held at 17 cents a gallon, with less talk of an impending cut.

Kerosene—New York

Kerosene is strengthening in all of the leading markets. Locally refiners are now asking from 7¾ to 8 cents a gallon for water white at the refineries and 9 cents delivered to the trade. Buying power is stronger. Export buyers are purchasing more heavily, in conjunction with gasoline. Some factors are asking 7 cents a gallon for prime white. One of the leading Independents is working on an inquiry for 40,000 cases of kerosene for late December-January shipment to China, while another is negotiating for the sale of 25,000 cases for January shipment to the Near East. Many local factors are looking for higher cased kerosene during the next week or so. South American buyers were inquiring for three lots of 10,000 cases each for late December shipment but these failed to materialize.

Kerosene—Gulf Ports

The Gulf market also showed a firmer tone and water white was held at 6⅞ to 7 cents and prime at 5⅞ to 6 cents as the week closed. Stocks in northern Europe are reported to be greatly depleted and it is expected that Scandinavian buyers will show a more active interest soon. Cased prime white is steady at $1.60 in cargo lots while water white is held at $1.70 a case. One of the big Independents is reported negotiating for the sale of 50,000 cases for January-forward shipment to Australasia.

Bunker Oil

Bunker oil is firm, although one of the New York harbor refiners is reported to have closed a contract at $1.62 a barrel, and is now asking the old price of $1.65 a barrel, refinery, for grade. At the Gulf ports the price is $1.50 a barrel, while at Tampico $1.45 is asked, including taxes. Heavy Panuco crude oil is steady and unchanged at $1.20 a barrel Tampico, taxes to be added. Locally Diesel oil is now offered at $1.99½ a barrel against $2.10 the preceding period.

Gas Oil

Gas oil is still soft, with little export interest shown. At local refineries, 36-40 is held at 5 cents a gallon, refinery, while 28-34 is held at 4¾ cents a gallon. In the Gulf section 26-28 transparent is freely offered at 4½ cents and 32 plus dark oil at 4¼ cents, but indications are that these prices can be shaded a trifle on a firm bid. Export buyers are apparently fairly well covered for the present.

Lubricating Oils

Demand for Pennsylvania cylinder stocks is slightly better, and a large French buyer is credited with the purchase of 500 barrels, at around 23½ cents a gallon, in barrels, New York. Neutral oils are also in slightly better demand.

Many here believe that Pennsylvania crude oil will be advanced before long, and consequently holders of Pennsylvania cylinder stocks are entertaining slightly firmer ideas. Western 600 s.r. in barrels, New York is well held at 14 cents a gallon, but demand is less spirited. The demand from France is expected to show a marked improvement soon, as there have been numerous inquiries from that country for neutral oils and cylinder stocks. The market for gulf coast zero cold test oils is quiet but fairly firm. It is persistently rumored that one of the large Independents has sold another cargo of assorted lubricants for January shipment, but confirmation and details are lacking. Prices were a trifle steadier.

Wax

The paraffin waxes are a shade easier, although sellers are reluctant to make concessions. Demand is slightly lighter, but sellers look for a resumption of heavy buying shortly. White crude scale 122-124 A.m.p. is in fair demand at 5⅞ cents a pound while 124-126 A.m.p. was steady at 5⅞ cents. Yellow crude scale 124-126 A.m.p. was quiet at 5⅝ cents. Demand for this grade was very sluggish. Fully refined waxes are moving in a larger way and 120-122 A.m.p. is held at 6⅛ cents a pound. Shorts seem fairly well covered. The asking price for 135-137 A.m.p. was steady at 7¼ cents.

In the Gulf section, waxes held steady. For white crude scale, 124-126 A.m.p. the asking price was 5⅝ cents a pound while 125-127 fully refined was in fair demand at 6⅛ cents, New Orleans. Fully refined 133-135 was held at 6½ cents while 135-137 was quoted at 7⅛ cents a pound.

Petroleum

The demand for petrolatums has improved a little. United Kingdom and French manufacturers of facial creams and toilet preparations in general show more disposition to purchase ahead. Snow white is held at 10¾ cents a pound while lily white is held at 8¼ cents a pound. Cream petroleum jelly is steady at 6¾ cents a pound.

The export demand for medicinal oils has been sluggish and 865-870 specific gravity was dull and unchanged at 70 to 75 cents a gallon. Other grades were featureless.

Puts Out Gasoline Tax Map

TULSA, Nov. 16.—A map, showing at a glance the amounts of gasoline road taxes in effect in the various states in the country, has just been compiled by Howard Bennette, managing director of the Western Petroleum Refiners Association. A figure representing the amount of the gasoline tax is written into each state so that anyone referring to it can tell at a glance what the tax is in each state.

Pacific Export Market

Cargo lots quotations at seaboard, Los Angeles)

	Nov. 14	Nov. 7
Gasoline, U. S. Motor—54°—56°	7½- 9	7½- 9
Gasoline—U. S. Motor blends and special cuts	8 - 9½	8 - 9½
Gas Oil, 24°—30°B. per bbl	$1.15	$1.15
Diesel Oil, 27°B—plus per bbl	$1.15	$1.15
Bunker Oil, 14°—18°B. per bbl	$1.00	$1.00
Fuel Oil, 14°—18°B. per bbl	$1.00	$1.00
Kerosene, W. W. 40°—42° B per gal., 125-150 flash test	.05 -06½	.05 -06½
Cased Goods		
Gasoline, U. S. Motor	$2.25	$2.25
Kerosene, W. W. 40°—42° B per case, flash test 125-150	$1.40-1.50	$1.40-1.50

New York Export Market

Prices below are an index to the export markets as of the dates given. In many cases they are actual sales prices. So many factors enter into the price in export transactions that an actual market price governing the bulk of transactions cannot be given.

	Nov. 16	Nov. 9
GASOLINE		
U. S. Motor, Bulk, Ref.	.11	-.11
KEROSENE		
45-150 W. W. Bulk Ref.	.08	.07¼-.07½
GAS OIL		
36-40, Bulk Refinery	-.05	-.05
28-34, Bulk Ref.	-.04¾	-.04¾
BUNKER OIL		
Grade C, Ref. Bulk	1.65	-1.65
Diesel Oil Ref. Bulk	1.99½	-2.10
LUBRICATING OILS		
The following prices are cooperage basis f. o. b. New York, products being manufactured by inland refineries.		
CYLINDER OILS (bbls.)		
1 inch Immersion Test		
Penna Filtered D 600	.32	-.33
Penna. Filtered E 600	.29	-.30
Unfiltered 600 s. r.	.24	-.24
Unfiltered 650 s. r.	.30½	-.30
600 flash s. r.	.33	-.33
Penna. 630 Flash	.42	-.42
RED PARAFFIN (bbls.)		
300 vis. at 100°F. No. 5.	.21½	-.21
250 vis. at 100° F. No. 5.	.20½	-.20
High Viscosity Paraffin No. 5.	.26	-.26
.885 s.g.pale 100 vis. at 100°F.	.14½	-.14½
Neutral Oils (bbls.)		
200 vis. at 70° F. Pale. No. 3	-.31½	-.31
180 Pale. 70. No. 3	-.29¼	-.28½
150 Pale. 70. No. 3	-.25	-.25
BLACK OIL (bbls.)		
25-30 cold test	.14 -.15	.14 -.15
15 cold test	.15 -.15½	.15 -.15½

	Nov. 16	Nov. 9
MEDICINAL OILS (Cooperage Basis) (Penna. Stocks)		
Domestic.875-.885s.g.drums	1.00-1.08	1.00-1.08
Domestic.865-.870s.g.drums	.75- .80	.75- .80
Russian.885-.890s.g.325-330 vis. drums	1.25-1.20	1.25-1.25
WAXES (Penna. Stocks) (F. A. S. Carload Lots)		
WHITE CRUDE SCALE		
122-124 A. m. p.	-.05¾	.05¾-.05¾
124-126 A. m.p.	.05¾-.06	.05¾-.06
MATCH		
105-108 A. m. p.	-.06	-.06
FULLY REFINED		
120-122 A. m. p.	.06¾	.06¼-.06¼
123-125 A. m. p. Philadelphia	.06¼	.06¼-.06¼
125-127 A. m. p.	.06¼	.06¼ .06¾
128 130 A. m. p.	.06½	.06¾ -.0[illegible]½
130-132 A. m. p.	.06¾	.06½ .06¾
133-135 A. m. p.	.06¾-.07	.06¾ -.07
135-137 A. m. p.	-.07¼	-.07¼
SEMI REFINED		
122-124 A. m. p.	-.05¾	.05¾
YELLOW CRUDE SCALE		
124-126 A. m. p.	.05¼	.05¼-.05¾
PETROLATUMS (Penna. Stocks)		
Dark Green	.02¾	.02¾
Veterinary	.03¼	.03¼
Light Amber	.03½	.03½
Dark Amber	.03¼	.03¼
Cream	.06½	.06½
Lily White	.08½	.08½
Snow White	.10½	.10½

N. Y. Export Quotations

Illuminating Oils
Standard Oil of New Jersey

	Nov. 16	Nov. 9
Bulk, gal., Bayonne		
Barrels, gal., Bayonne, cargo		
Cases, gal., Bayonne	17.15	16.90

Prices for water white oil (150 test) are 1 cent higher than those for standard white.

Gasoline-Naphtha
(Cents per Gallon)

U. S. Motor, dead bulk		
U. S. Motor, cases	27.15	27.15
Export Naphtha bulk		
*62-63 deg. bulk		
66-68 deg. bulk		

*Grade changed from 64-66 to 62-63 Jan. 9.

Tide Water Oil Company
(f. o. b. Bayonne)

58-59 deg. bulk		
58-59 deg. cases	27.15	27.15
Export grade, U. S. Motor Specifications bulk		
68-72 deg. bulk		

	Bulk Barrels	Cases
Standard white 110		17.15
Water white 150		18.15

The Texas Company

Gasoline, cases	27.15	27.15

Kerosene	Bulk Barrels	Cases
Standard White		17.15
Prime White		17.65
Water White		18.15

Gulf Export Market

Gasoline

	Nov. 16	Nov. 9
U. S. Motor, Cargo	.10¾-.11	10¾ .11
60-62 400 e. p. Bulk	.12¾	- 12¾
64-66, 385 e. p. Bulk	.13¼-.14¼	13¾-.14½
U. S. Motor, Cases (cargo lots)	2.25	2.25
64-66, Cases (cargo lots)	2.55	2.55
KEROSENE		
Water White, bulk	.06¾-.07	.06¾- .07
Prime White, bulk	.05¾-.06	.05¾-.06
Water White, cases (cargo lots)	1.70	1.70
Prime White, cases (cargo lots)	1.60	1.60
GAS AND BUNKER OIL		
26-28, gravity, bulk. Transp.	.04¼	-.04¾
32 plus, bulk, Dark	.04¼	-.04¼
Grade C, Bunker oil	1 50	-1.50
MEXICAN CRUDE AND BUNKER OILS		
Heavy, f.o.b. Tampico, Taxes to be added	1.20	-1.20
Mexican Grade C. Bunker oil F. O. B. Tampico Taxes paid	1.45	1.40
Mexican C, Bunker oil New Orleans	1.50	1.50

Lubricating Oils
SOUTH TEXAS
(Viscosity at 100°F; cold test 0)
(Tanker, F. O. B. Houston)

	Nov. 16	Nov. 9
100 Vis. No. 2 Unfiltered Pale	07	07
150 Vis. No. 2½ Unfiltered Pale	10	10
200 Vis. No. 3 Unfiltered Pale	11½	11
300 Vis No. 3 Unfiltered Pale	13½	13½
500 Vis No. 3½ Unfiltered Pale	15½	15½
200 Vis No. 5½ Red Oil	10½	10
300 Vis. No. 5½ Red Oil	12	12
500 Vis. No. 6 Red Oil	14	14
800 Vis. No. 6 Red Oil	19	20

Magnolia Compares Crude Oil Runs

HOUSTON, Nov. 12.—The Magnolia Petroleum Company, pipeline department, announces from Dallas headquarters the following crude oil runs for October, which are shown in comparison with September:

	September	October
Hewitt Crude ..	86,810.63	85,361.50
Healdton	196,125.54	207,573.60
Cushing	331,627.11	347,702.10
Yale	56,532.30	55,274.22
Cement	22,817.52	22,739.48
Duncan	52,524.81	49,893.50
Augusta, Kans...	35,617.50	37,569.72
Walters-Beaver Creek	10,276.22	9,207.85
Burbank	162,621.13	110,093.65
Wewoka	160,991.55	150,045.39
Total Okla.-Kans. 1,116,127.78		1,075,461.01
Thrall	1,548.66	1,557.28
Electra	117,856.08	121,254.27
Burkburnett ...	85,180.82	85,098.03
Henrietta	6,595.26	6,959.63
Corsicana Heavy	9,529.21	9,088.28
Corsicana Light	28,270.94	27,276.52
Comanche	30,457.05	30,412.34
Olden	34,759.02	32,480.24
Stephens	17,386.56	17,076.47
Coleman	505.02	314.36
Mirando	19,295.48	28,976.33
Mexia	75,621.01	70,107.90
Luling	126,644.94	231,459.18
Archer	71,214.08	78,786.92
Lytton Springs..	164,068.59	169,755.63
Iatan	.....	5,620.71
Total Texas.....788,932.72		916,224.09
Haynesville	7,402.67	6,278.79
Bull Bayou	39,061.61	40,011.37
Cotton Valley...	23,140.09	23,351.67
Total Louisiana..69,694.37		69,641.83
El Dorado Light	75,701.90	77,941.12
East El Dorado.	2,164.97	2,716.54
Total Arkansas ..77,866.87		80,657.66
Grand Total ..2,046,618.66		2,141,984.59

OKLAHOMA-KANSAS

Report for October, 1925.

		Daily Average
Runs	1,075,461.01	34,692.29
Shipments	1,337,816.89	43,155.38
Stocks	6,682,552.26	

TEXAS

Wichita and Wilbarger Counties:		
Runs	285,139.22	9,198.03
Shipments	294,663.21	9,505.26
Petrolia:		
Runs	79,969.05	2,579.64
Shipments	6,021.00	194.22
Eastland and Stephens Counties:		
Runs	79,969.05	2,579.64
Shipments	100,075.04	3,228.22

Total stock North Central Texas field, 2,361,031.94.

New Independent in Michigan

NASHVILLE, MICH., Nov. 16.—The recently organized Independent Oil Co. of this city reports that it is all that the name implies. The company is handling Marland products. W. J. Liebhauser is president, and G. C. Edwards is secretary and treasurer.

The company has installed visible pumps. As an advertising stunt, it is giving away a quart of oil to every purchaser of five gallons of gasoline when the customer presents one of their coupons with name and address.

HOUSTON, Nov. 16.—Crown Central Petroleum Corp., operating a lubricant plant on the Houston ship channel, announces tank car shipments of Mirando district crude during October of 90,061 barrels. This crude was shipped to its Houston plant in 417 cars.

Crude Oil Prices All Fields

ALL PRICES EFFECTIVE, *Nov. 16*

EASTERN FIELDS
Posted by Joseph Seep Purchasing Agency

Penna. Grade Oil in New York Transit Lines (Allegheny, N. Y. District)	$3.15	Gaines, Tioga Co. (Pa.)	$2.70
Bradford District Oil in National Transit Lines (Bradford District)	3.15	Cabell Grade in Eureka Pipe Lines (West Virginia)	1.95
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	3.05	Corning Grade in Buckeye Pipe Lines (Ohio)	1.80
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	3.05	*Somerset Medium in Cumberland Pipe Lines (Kentucky)	2.05
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	3.00	*Somerset Light in Cumberland Pipe Lines (Kentucky)	2.20
Penna. Grade Oil in Buckeye Pipe Lines (Ohio)	2.80	Ragland Grade in Cumberland Pipe Lines (Kentucky)	1.00

*Somerset oil run prior to Oct. 1, 1925, takes price of 6 cents lower than above quotations.

CENTRAL STATES FIELDS
Posted by Ohio Oil Co.

Wooster	$2.00	Indiana	$1.78	Plymouth	$1.40
Lima	1.98	Princeton	1.87	*Canadian Petrolia	2.38
		Illinois	1.87	*Posted by Imperial Oil, Ltd.	

OKLAHOMA, KANSAS And NORTH TEXAS FIELDS
(Prices of Prairie Oil & Gas Co.)
(Prairie's prices apply in Oklahoma, Kansas, North and Central Texas.)

*28-28.9	$1.15	34-34.9	$1.63	40-40.9	$2.11
29-29.9	1.23	35-35.9	1.71	41-41.9	2.19
30-30.9	1.31	36-36.9	1.79	42-42.9	2.27
31-31.9	1.39	37-37.9	1.87	43-43.9	2.35
32-32.9	1.47	38-38.9	1.95	44 and above	2.43
33-33.9	1.55	39-39.9	2.03		

*Effective Nov. 1, Prairie announced to its present customers that it would deduct 8c per barrel for every degree below 28 gravity on Mid-Continent and North Texas crude. It will pay $1.07 for 27-27.9, 99c for 26-26.9, etc. New quotations are not added to present schedule inasmuch as Prairie is not in the market for new connections on this low gravity crude.

Humble Oil & Refining Co. Prices
(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie and Moran crudes, all in Texas.)

28-28.9	$1.35	34-34.9	$1.71	40-40.9	$2.07
29-29.9	1.41	35-35.9	1.77	41-41.9	2.13
30-30.9	1.47	36-36.9	1.83	42-42.9	2.19
31-31.9	1.53	37-37.9	1.89	43-43.9	2.25
32-32.9	1.59	38-38.9	1.95	44 and over	2.31
33-33.9	1.65	39-39.9	2.01		

Magnolia Petroleum Co. Prices

*In Oklahoma and Kansas		**In North Texas	
Below 28	$1.00	Below 28	$1.00
28-30.9	1.31	28-30.9	1.55

*Remainder of Magnolia's gravity schedule in Oklahoma and Kansas begins with 31-31.9 and follows Prairie schedule.

**Remainder of Magnolia's gravity schedule in North Texas begins with 31-31.9 and follows Humble schedule.

NORTH LOUISIANA—ARKANSAS FIELDS
***Prices of the Standard Oil Co. of Louisiana**

Caddo, below 32	$1.65	Haynesville, below 33	$1.55	Smackover, 24-24.9	$1.15
do 32-34.9	1.75	do 33 and above	1.65	do 25-25.9	1.20
do 35-37.9	1.85	El Dorado, below 33	1.55	do 26-26.9	1.25
do 38 and above	1.95	do 33 and above	1.65	do 27 and above	1.30
Homer, below 31	1.40	Bull Bayou, 32-34.9	1.45	De Soto	1.80
do 31-32.9	1.55	do 35-37.9	1.60	Crichton	1.60
do 33-34.9	1.65	do 38 and above	1.75	Bellevue	1.65
do 35 and above	1.75	Smackover, below 24	.85	Cotton Valley	1.10

*Same prices maintained by The Texas Co. and Gulf Production Co. The Texas Co. buys in Caddo, Bull Bayou, De Soto, Crichton and Smackover fields.

STEPHENS, ARKANSAS
Posted by Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

26 and above	$1.40	Below 26	$1.20

SMACKOVER, ARKANSAS
Prices of Louisiana Oil Refining Corp.

Below 24	$0.85	25-25.9	$1.25	27 and above	$1.35
24-24.9	1.15	26-26.9	1.30		

SMACKOVER, ARKANSAS
Prices of Atlantic Oil Producing Co. and Shreveport-Eldorado Pipe Line Co.

Below 24	$0.90	25-25.9	$1.25	27 and above	$1.35
24-24.9	1.15	26-26.9	1.30		

GULF COASTAL FIELDS
(Posted by Humble Oil & Refining Co., The Texas Co., Gulf Production Co., Sun Oil Co. and Sinclair Crude Oil Purchasing Co.)

Grades A	$1.50	Grades B	$1.25

Goose Creek, Hull, Orange and Pierce Junction are the only Gulf Coastal fields that have A and B grade classifications. All other fields are classified as A grades only.

ROCKY MOUNTAIN FIELDS
Prices of Ohio Oil Co. and Midwest Refining Co.

†Salt Creek 29-29.9	$1.23	36-36.9	$1.79	Rock Creek	$1.75
30-30.9	1.31	37 and above	1.87	†Osage	1.90
31-31.9	1.39	Elk Basin	1.90	†Cat Creek, Mont	1.90
32-32.9	1.47	Grass Creek light	1.90	Sunburst, Mont	1.55
33-33.9	1.55	Big Muddy	1.75	†Hogback, N. Mex	1.95
34-34.9	1.63	Lance Creek	1.90	Artesia, N. Mex	1.45
35-35.9	1.71				

†Posted by Midwest Refining Co. Midwest also buys Grass Creek light, and Elk Basin. The Texas Co. buys Salt Creek crude.

CALIFORNIA
Prices of Standard Oil Co. of California

Standard Oil Co. of California on Sept. 22 reduced California crude from 10 to 35 cents per barrel and posted 19 new price classifications in the various fields. Instead of paying the same price for the same gravity of oil in all fields regardless of the value of the oil, as it previously has done, the Standard put into effect a new schedule which provides a different schedule of prices for each field and takes into account the varying values of oils of the same gravity in the different fields.

On Oct. 27, it further reduced heavy oils in amounts ranging up to 15 cents. New base price for heavy oils in the San Joaquin Valley is 75 cents, in Southern California fields, 85 cents, and in the Rosecrans-Dominguez, Santa Maria and Ventura county fields, it is $1 per barrel for 14 to 14.9 gravity. Light oils remain unchanged.

The new complete schedule of prices in California can be obtained from the editorial department of National Petroleum News on application.

Orders for Oil Country Pipe Slow; Construction Work is Active

PITTSBURGH, Nov. 17

SHRINKING orders for oil country goods are encountered everywhere by the pipe producers in this and in nearby districts, which is natural at this season of the year, but shipments keep up remarkably well.

Order books, however, are being divested of their backlogs in many directions and only partially are they being replenished. In some sections weather conditions interfere greatly with the transportation of drilling equipment and pipe to the drilling operation and work will be postponed until next year.

From time to time, however, orders are received from oil country jobbers but in the main these are endeavoring to hold their stocks down for inventories. However, the aggregate each week of small orders, one, two or three carloads apiece, is fair, and through its subsidiary the Continental Supply Co., St. Louis, the Youngstown Sheet & Tube Co., recently received a large order for 140 miles of 10-inch pipe for a pipe line in Arkansas for the Crusader Pipe Line Co., involving about 16,000 tons of pipe.

The plate market continues fairly active and prices are strengthening slowly. The minimum at Pittsburgh now 1.85 cents a pound instead of 1.80 cents as recently, will shortly be displaced by a firm 1.90 cent minimum. Some already quote that figure. The tanks for the Marland Refining Co., Ponca City, Okla., numbering 75, require 3600 tons of steel plates will be fabricated by the Graver Corp., the steel to be rolled by a Chicago producer. The shapes for its machine shop there, about 290 tons, went to the Kansas City Structural Steel Co., Kansas City. Another Chicago steelmaker recently took 5000 tons of tank steel and fully 15,000 tons of this material is still pending before the trade there. Much steel plate is being needed for tank cars. The Conley Tank Car Co., is in the market for 200 tank cars. The Sun Oil Co., and the Rajah Oil Co., each ordered 10 tank cars from the Standard Tank Car Co. The Standard Oil Co., of Indiana is in the market for 135 refinery stills taking 2500 tons of plates. The Sinclair Refining Co., recently ordered 50 10,000-gallon tank cars from the General American Tank Car Corp.

The Standard Oil Co., of Indiana is to erect a distributing plant at West Indianapolis taking 300 tons of structural material. Shapes are quoted at 2.00 to 2.10 cents a pound, Pittsburgh.

One of the largest tin plate inquiries recently before makers comes from the Standard Oil Co., of New Jersey for 318,000 base boxes for the first half of 1926 and 439,000 base boxes for the last half. Books are not yet opened for the first quarter and while it is possible an advance will be made due to the high cost of tin, $5.50 per base box 100 pounds, f.o.b. Pittsburgh mill, is still the quotable market.

The A. O. Smith Corp., Milwaukee has work about 60 per cent completed on its $350,000 addition and announcement is made that contracts have been let for another extension to cost $300,000. The first unit will accomodate the new division to manufacture elec-

(Continued on page 94)

Refining Supplies Active Animal Oils Steady

NEW YORK, Nov. 16.—Following is a review of the markets for oils and supplies used in compounding and refining;

Alcohol demand much improved. Sudden cold snap created good buying movement. Prices are firmer. Stocks on hand slightly depleted. Production normal.

Animal Oils steady. Oleo stearine movement better at slight reduction. Lard oil demand more spirited. Better request for tallow oil. Domestic degras steady. Neatsfoot oil buying slightly heavier. More interest in oleic acid.

Bleaching Powder contract demand spirited. Spot flat. Prices show firmer tendency. Offering for future shipment smaller.

Caustic Soda demand much better. Spot quiet. Buying chiefly for 1926 delivery. Export inquiry better.

Soda Ash movement larger. Spot demand better. Offerings for immediate and future deliveries lighter. Prices firmer.

Sal Soda demand slightly more active. Demand for 1926 delivery better. Better inquiry for large quantities.

Linseed Oil buying lighter. Consumers waiting for tariff developments. Stocks on hand moderate. Crushers confident. Reluctant to make concessions. Good inquiry for next spring delivery from paint makers.

Castor Oil easy. Buying interest waning. Movement chiefly hand-to-mouth. Stocks fair.

Naval Stores offered sparingly. Medium rosins in good demand. Export buyers are showing more interest. Demand for turpentine improving. Receipts at Southern points still small. Tar and pitch movement is gaining. Rosin oils in good demand.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are the average market prices for the week on materials used by refiners and compounders f. o. b. shipping point as effective this date.

Refiners' Supplies

	Nov. 16	Nov. 9
Soda Ash light 58% bags cwt.	-$1.38	-$1.38
Silicate of Soda 60 deg. drums.....cwt.	- 1.70	- 1.70
Sal Soda wks.....cwt.	1.10- 1.25	1.10- 1.25
Caustic Soda 70% solid..cwt.	- 3.10	- 3.10
Chloride of Lime.....cwt. works.....	-2.00	- 2.00
Sulphuric Acid 60 deg. tank cars f. o. b. shipping point.....per ton	-10.50	-10.50

Compounders' Supplies (Open Market)

Vegetable Oils—		
Linseed carloads spot.....lb.	12.8	12.9
February.....	12.8	12.9
Tanks, spot.....	12	12.1
Boiled carloads spot.....lb.	12.9	13
*Soya Bean spot, Bbls....lb.	13½	13½
Animal Oils—		
English Degras.....lb.	.05½	-.05½
Domestic Degras, bbls., carloads.....lb.	-.04½	-.04½
*Horse.....lb.	-.10	-.10
Oleic Acid—		
Dist. Bbls.....lb.	.11½-.12	.11½-.12
Saponified Bbls.....lb.	.11½-.12	.11½-.12
Castor Oil—		
No. 3 Carlots, Bbls.....	-.15	-.15
No. 1 Carlots, Bbls.....	-.15½	-.15½
Lard Oils—		
Prime		
Winter Strained. 1 to 1½ffa.40‡45c.t.lb.	.18¾	.18½
Extra		
Winter Strained. 2 to 4½ffa.40/45c.t.lb.	.14¾	.17½
Extra..... 4 to 5 ffa.40/45c.t.lb.	.13¾	.14¼
Extra No. 1 7 to 10 ffa.40/50c.t.lb.	.13¼	.13¾
No. 1.....15 to 18 ffa.40/45c.t.lb.	.13	.13
No. 2.....22 to 23 ffa.40/45c.t.lb.	.12½	.12¾
Prime Edible Tallow under 1½ffa. 40/45c.t.N.Y.....lb.	-.11¼	-.11¼
Tallow acidless.....lb.	-.12¾	-.13½
Lard Stearine.....lb.	-.18¾	-.20
Oleo Stearine.....lb.	-.13	-.14
Neatsfoot Oil—		
Pure.....bbls.-lb.	.14¼	.15¼
Extra.....do lb.	.13¼	.13¾
No. 1.....bbls.-lb.	.13	.13¼
Cold pressed.....lb.	.17½	.18¼
Fish Oils—		
Menhaden Oil		
Light pressed.....gal.	.67-.70	67-.70
White.....gal.	.70-.72	70-.72
Yellow bleached.....gal.	.73-.75	73-.75
*Herring tank cars coast.....gal.	-.50	-.50
Whale, extra winter bleached.....gal.	-.82	-.82
Seal.....gal.		Nominal
Naval Stores—		
Turpentine, N. Y.....gal.	1.13	1.13
Turpentine†.....gal.	1.07	1.07
Rosin, B. N. Y.....Bbl.	15.70	15.80
Rosin, F. N. Y.....Bbl.	15.70	15.80
Rosin, B†.....Bbl.	14.15	14.30
Rosin, F†.....Bbl.	14.15	14.30
Rosin Oil 1st run.....gal.	.85	.85
Rosin Oil 2nd run.....gal.	.90	.88
Pine Tar—		
Kiln Burnt.....Bbl.	15.50	15.00
Retort.....Bbl.	15.50	15.00
Alcohol—		
Formula 6		
Bbls.....gal.	-59½	59½
Drums.....gal.	-58½	58½

†Savannah, Ga. market.
*Nominal.

OIL STOCKS AND FINANCES

Magnolia Stockholders to Vote on Merger With Standard of New York

Staff Special

HOUSTON, Nov. 14.—Stockholders of the Magnolia Petroleum Co. on Nov. 24 will meet at Dallas to vote on a proposal for consolidation with the Standard Oil Co. of New York. Trustees of the Magnolia have just announced that a contract exists, subject to approval of Magnolia stockholders, for the exchange of four shares of Standard of New York $25 stock for each share of $100 Magnolia. The Standard already holds about 70 per cent of the issued Magnolia stock. The exchange was made possible by the recent increase in the authorized capital stock of the Standard from $235,000,000 to $375,000,000.

The business in the southwest would continue to be conducted under the name Magnolia with the present management, it was announced. The minority stock constitutes the voting trust but the consolidation would vest the Standard with this right. Magnolia would have substantial representation on the Standard of New York board.

In a letter to stockholders the advantages of the merger are set forth as follows:

"Such a merger, your trustees believe, would be a natural and advantageous development from the relations of these companies. Standard Oil Co. of New York has intensively developed marketing facilities throughout New York and New England, where there is a vast and rapidly growing demand for petroleum products. It has an established good will and has built up physical distributing facilities of great value. Standard of New York has also developed widespread marketing facilities in China, Japan, Philippine Islands, Java, Straits Settlements, India and the Near East and created and established reputation for its brands in these vast, thickly populated areas, which promises to develop a demand for petroleum products far more extensive than the large market which they at present afford.

"While Standard of New York has created and operates this extensive marketing organization, it has only a relatively small refining capacity and no crude petroleum production. On the other hand, Magnolia Petroleum Co. has developed a large crude oil production and refining capacity convenient to the Gulf ports and has no marketing facilities except in Texas and other southwestern states.

"The business and properties of the two companies are therefore naturally complementary. There merger will create a unit which, like other large companies engaged in widespread competition in domestic and foreign trade, will be equipped with its own producing, refining, transportation and marketing facilities. The merger of these two complementary units in a single management with the flexible application of the combined resources to the extension of production, refining and marketing, whenever opportunity offers, will inure to the interest of the present shareholders and result in wider and more efficient service to the public."

The letter to Magnolia stockholders was signed by the following trustees: John Sealy, E. R. Brown, R. Waverly Smith, E. E. Plumby, W. C. Proctor, Courtenay Marshall, Frank V. Faulkner, A. C. Ebie, D. C. Stewart, B. H. Stephens, and W. H. Francis.

Union Tank Car To Pay 33 1/3% in Stock

NEW YORK, Nov. 14.—Union Tank Car Co. has declared a 33⅓ per cent stock dividend payable Dec. 10 on common stock of Nov. 23 record. This will bring the company amount of common stock up to about $24,153,000 out of an authorized $25,000,000. This dividend rate will be maintained at $5 per share of $100 par value.

The company paid a 50 per cent stock dividend in 1922.

No fractional shares will be issued but the company will pay in cash the value of any fractional share to which the holder would otherwise be entitled at a price to be fixed by the treasurer of the company on the average closing bid price, or on an ex-dividend basis, between Nov. 12 and Nov. 23. The stock has been selling lately above $130 a share.

Cities Service Co.—Net to stock and reserves in September was $963,561 as compared with $829,354 in September, 1924. Net to common stock and reserves was $525,780 as compared with $401,794 in the previous year.

Lion Oil Reports Big Increase in Sales

CLEVELAND, Nov. 14.—Greatly increased volume of sales by the Lion Oil Refining Co. in the first nine months of this year enabled it to report net income after interest charges but before depreciation, depletion and federal taxes more than double net income of the first nine months of 1924. Gross sales were approximately 40 per cent greater while cost of sales was relatively less.

The company has a 10,000-barrel refinery at El Dorado, Ark., and its own production which at present exceeds 10,000 barrels per day, President E. C. Winters reports.

The balance sheet as of Sept. 30 shows current assets of $1,759,232 and current liabilities of $655,495, leaving net working capital of more than $1,100,000. Income accounts for the first nine months of 1925 and 1924 compare:

	1925	1924
Sales	$5,642,224	$3,965,100
Cost of sales	3,375,086	2,800,288
Gross profit	$2,266,938	$1,164,812
Expenses	165,264	148,004
Operating income	$2,101,674	$1,016,808
Miscel. income	39,264	39,500
Total income	$2,140,938	$1,056,308
Interest	101,926	147,267
Balance applicable to reserve taxes and surplus	$2,039,012	$ 909,041

Balance sheet of Sept. 30, 1925, before deducting depreciation and depletion on producing property and federal income taxes for 1925, follows:

ASSETS

Cash	$ 258,573
Acc'ts, notes rec.	366,068
Crude oil	566,083
Refined products	427,451
Materials, supplies	141,057
Prepaid expenses	83,945
Producing property	2,424,816
Refining and transportation properties	3,237,026
Total	$7,505,019

LIABILITIES

Bank loans	$ 150,000
Tank car notes	51,720
Other notes payable	35,500
Accounts payable	246,750
Reserves and accruals	171,525
Tank car trust notes	33,750
1st Mortgage 7% bonds	925,000
Deferred liabilities	43,217
Net worth*	5,847,557
Total	$7,505,019

*Represented by 200,000 shares no par capital stock.

OIL DIVIDENDS

	Amount	Payable	Stock of Record
Cumberland P. L. q.	$3	Dec. 15	Nov. 30
California Pet. q.	50c	Dec. 1	Nov. 20
Imperial Oil q.	25c	Dec. 1	Nov. 14
Northern P. L. s.a.	$3	Jan. 1	Dec. 8
S. O. New York q.	35c	Dec. 15	Nov. 20
Shell Union q.	35c	Dec. 31	Dec. 10
Union Tank Car Stock	33 1/3%	Dec. 10	Nov. 23
General Pet. q.	75c	Dec. 15	Nov. 30
S. O. Ohio	$2.50	Jan. 1	Nov. 27

Transactions In Oil Shares on New York Stock Exchange

1924 High	1924 Low	1925 High	1925 Low		Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Nov. 13 Sales	First	High	Low	Last	Chg'e
48	25	76	48	(sh)	200,000	N.P.	American Republics	.....	.....	300	61⅛	63½	61	63½	+2½
34⅝	27½	41½	32	$	56,000,000	$25	Associated Oil	50cQ	Oct. 26, 25	21,600	36⅝	40¼	36⅝	40	+2⅞
140⅛	78½	117½	95½		50,000,000	100	Atlantic Refining	.....	June 16, 24	11,600	102	110	102	110	+7
118	108	117¾	113½		20,000,000	100	do pfd	$1¾Q	Nov. 2, 25	100	117¾	117¾	117¾	117¾	+1¾
23½	14	30	18¾		18,428,350	25	Barnsdall Corp. A	.....	Apr. 30, 21	15,900	24½	25⅛	22⅜	25⅛	+1¼
17½	10	24¼	16		3,713,275	25	do B	.....	Apr. 30, 21	5,400	22⅞	24¼	22½	24⅛	+1¼
4¼	1	2⅜	⅜	(sh)	150,000	N.P.	Caddo Central O. & R	.....	.....	7,800	⅜	⅝	⅜	½	— ⅛
29½	19½	32⅛	23⅞	$	30,549,925	$25	California Petroleum	50cQ	Dec. 1, 25	161,300	31	32⅝	30¼	32⅜	+1⅜
63¾	31⅜	62¾	42½		19,832,300	100	General Asphalt Co	.....	.....	37,400	58⅛	61⅝	55	59⅜	+1½
100	71½	101⅜	86¾		7,416,000	100	do pfd	$1½Q	Dec. 1, 25	1,700	99¼	101⅜	99	101⅜	+ ⅞
45	38¾	59	42		29,194,650	25	General Petroleum	50cQ	Sept. 15, 25	68,200	48⅛	51⅜	47⅜	51	+2¾
82½	61	85	59		25,000,000	100	Houston Oil Co	.....	.....	8,300	69⅞	73	69½	72½	+3¼
16¼	5¾	40½	13½	(sh)	500,000	N.P.	Independent Oil & Gas	25cQ	Oct. 5, 25	92,100	31¾	34¾	28	32¾	+1⅜
7⅛	3¾	10⅜	5½	$	3,256,590	$10	Indian Refining Co	.....	Dec. 15, 20	5,200	9¼	9¾	8⅞	9½	+ ⅛
75	60	97	77		2,296,400	100	do pfd	.....	Dec. 15, 21	700	95	97	95	96	+5
1	¼	1½	¼		1,678,760	10	Kansas & Gulf Corp	.....	.....	2,300	½	½	½	½	0
.....	.....	23¾	13⅝	(sh)	1,078,166	N.P.	Louisiana Oil Refining	.....	.....	27,000	17	18	16⅛	18	+1½
37½	24⅜	35½	20⅜	(sh)	830,000	N.P.	Maracaibo Oil	.....	.....	5,000	23¼	26½	22½	25½	+2⅜
42	29	58¾	32⅝	(sh)	1,885,343	N.P.	Marland Oil Co	75cQ	Sept. 30, 25	256,800	55¼	58¾	52⅝	58½	+2½
190	190	250	225	$	45,942,800	$100	Mexican Petroleum Co	$3Q	Oct. 20, 25	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....		12,000,000	$100	do pfd	$2Q	Oct 20, 25	.....	.....	.....	.....	.....	.....
25¾	14⅛	22¾	10¾	(sh)	945,989	N.P.	Mexican Seaboard Oil	.....	Nov. 15.24	12,900	11⅞	12½	11¼	11¾	— ¼
40¾	22⅝	38	26	(sh)	1,357,800	N.P.	Mid-Continent Petroleum (Cosden)	.....	Aug. 1, 23	237,600	34⅞	38	31¾	37¼	+2¼
95	80	94¼	83	$	6,718,000	$100	do pfd	$1¾Q	Dec. 1, 25	300	92⅞	94	92⅞	94	0
6⅞	1	3½	⅝	$	26,013,700	10	Middle States Oil Corp	.....	July 1, 23	7,100	1¼	1¼	1⅛	1¼	0
58¾	45	65¼	51⅝	(sh)	3,500,000	N.P.	Pacific Oil Co	$1.50S.A.	July 20, 25	251,000	56	61⅞	56	59⅞	+4⅜
65	44¼	83⅞	59½	$	48,307,400	$50	Pan American P. & T	$1.50Q	Oct. 20, 25	14,600	72	73⅞	70¼	73⅞	+1⅝
64⅝	41¼	84½	60¾		90,476,200	50	do Class B	$1.50Q	Oct. 20, 25	173,900	73¼	75½	71⅜	75	+2
.....	.....	44⅞	41½	(sh)	400,000	N.P.	Pan American Western B	.....	.....	34,800	42⅜	44½	40½	44⅜	+2
4⅜	1⅝	5⅜	2¼	(sh)	198,770	N.P.	Panhandle P. & R	.....	.....	1,400	3	3¾	3	3¾	+ ¾
42½	29	60½	37	$	2,935,200	$100	do pfd	.....	July 2, 23	100	40	40	40	40	0
42½	28½	47⅛	36¼	(sh)	1,925,152	N.P.	Phillips Petroleum	50cQ	Oct 1, 25	177,000	43¾	46¼	40½	45⅛	+1⅜
4½	1½	3⅜	1¼	$	29,622,925	$25	Pierce Oil Corp	.....	.....	11,800	1½	1⅝	1¼	1⅜	+ ⅛
36	20	40	22		15,000,000	100	do pfd	.....	Feb. 1, 22	900	24⅛	25	23	25	1¼
5¾	4⅜	8¼	4¾	(sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	3,800	5	5⅜	4¾	5⅛	+ ⅛
43½	22¾	32⅝	13½	$	11,467,850	50	Producers & Refiners	.....	Sept. 15, 23	2,900	16⅞	17¾	16⅜	17	0
47½	42	47⅝	27		2,845,350	50	do pfd	.....	May 1, 25	100	31	31	31	31	0
30¼	20	33¾	25⅜		75,959,250	25	Pure Oil Co	37½cQ	Dec. 1, 25	13,500	27	28⅞	26⅞	28¾	+1½
105¼	92	108½	103		13,000,000	100	do 8% pfd	$2Q	Oct. 1, 25	.....	.....	.....	.....	.....	.....
59½	40¾	57⅜	48¼	(sh)	820,436	13.40	Royal Dutch, N. Y. shares	$1.73½	Aug. 1. 25	14,500	53¼	54¾	52¼	54⅜	+ ⅜
42	33	45¾	30½	(sh)	105,575	£2	Shell Transport & T	$1.21	July 25, 25	1,800	43⅛	44¼	43¼	44¼	+ ½
22½	15¾	28⅜	21⅝	(sh)	10,000,000	N.P.	Shell Union Oil Corp	35cQ	Sept. 30, 25	39,000	24⅝	25½	24⅛	25¼	+ ⅜
99½	91½	106½	99½	$	20,000,000	$100	do pfd	$1½Q	Nov. 16, 25	500	106½	106½	105½	105½	— ½
24	10¾	26¾	18⅝		7,207,090	10	Simms Petroleum Co	50S.A.	July 1, 25	48,300	23	24⅝	22¼	23⅞	+1⅜
27¾	15	24⅞	17	(sh)	4,484,450	N.P.	Sinclair Consolidated	.....	May 31, 24	83,700	19⅞	22	19¼	21¾	+2
90	75	94⅛	78¾	$	18,190,200	$100	do pfd	$2Q	Nov. 16, 25	1,400	89	90½	87½	90½	½
29	17⅜	32½	21¾		20,966,500	25	Skelly Oil Co	.....	.....	153,300	29⅛	32½	28¼	32	+3⅛
68¾	55⅞	67¼	51½		236,869,225	25	S. O. California	50cQ	Sept. 15, 25	13,200	55¼	58⅜	55¼	57⅜	+2½
42¾	33	47½	38¾		511,631,025	25	S. O. New Jersey	25cQ	Sept. 15, 25	89,300	41⅜	46	41	45⅝	+4⅛
119⅜	115¾	119	116¼		199,972,900	100	do pfd	$1¾Q	Sept. 15, 25	3,300	117⅞	118	117¾	118	+ ¼
8⅛	2⅜	6⅛	2¾	(sh)	1,121,368	N.P.	Superior Oil Corp	.....	Dec. 20,20	2,200	3	3	2¾	2⅞	— ⅛
45⅜	37¾	53⅜	42¾	$	164,450,000	$25	The Texas Co	75cQ	Sept. 30, 25	88,000	51⅛	53⅜	50⅜	53	+1⅜
15¼	8	23⅜	10⅞		8,380,340	10	Texas Pacific Coal & Oil	.....	June 30, 23	18,000	13¼	15	13	14⅞	+1⅜
.....	.....	36¼	30¼	(sh)	2,017,719	N.P.	Tide Water Oil Co	25cQ	Sept. 30, 25	9,100	33⅝	35½	32⅝	35¼	+2¼
.....	.....	101	99¾	$	25,059,000	$100	do 5% pfd	$1.25Q	Nov. 16, 25	3,300	100	100¼	99¾	100	0
6¼	3¾	5⅞	3½	(sh)	3,742,029	N.P.	Transcontinental Oil Co	.....	.....	25,000	3¾	4¼	3⅝	4⅜	+ ⅝
39	35	43¾	33	$	40,480,800	$25	Union Oil of California	45cQ	Nov. 10, 25	15,100	35	36⅞	34⅝	36½	+1¼
152⅞	94	134	118		18,262,300	100	Union Tank Car Co	$1¼Q	Dec. 1, 25	4,700	133	133⅝	127	130½	—1½
116¾	106¾	117⅝	113¾		12,000,000	100	do pfd	$1¾Q	Dec. 1, 25	300	115	115	114	114	—1
29⅜	23⅛	31¾	25½	(sh)	490,000	N.P.	White Eagle Oil & Ref	50cQ	Oct. 20, 25	7,500	26⅝	28⅛	26½	27⅞	+1¾

*New High †New Low xEx-dividend Total Sales 2,293,900

Standard Oil Stock Traded In New York Curb Market

1924 High	1924 Low	1925 High	1925 Low		Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Nov. 13 Sales	First	High	Low	Last	Chg'e
13¾	14⅛	26¾	18	£	3,000,000	£1	Anglo American	60¾cS.A.	May25, 25	2,400	23¾	24	23⅝	24	+ ⅜
4⅞	2	4	2	(sh)	500,000	N.P.	Atlantic Lobos	.....	.....	400	2¼	2⅝	2¼	2¾	— ⅜
16	5	12¾	8	$	10,000,000	$10	do pfd	.....	.....	300	4⅞	5	4⅞	5	+ ½
265	155	240½	205		1,000,000	$100	Borne-Scrymser	‡84S.A.	Oct. 15, 25	10	230	230	230	230	0
85½	51	72	54		10,000,000	50	Buckeye Pipe Line	$1Q	Sept. 15, 25	450	56½	57	56	56	0
52½	47⅜	73	48¾		3,000,000	25	Chesebrough Mfg. Co	62½cQ	Sept. 30, 25	1,800	69⅞	73	65	72	+2
115	112	115	110		1,000,000	100	do pfd	$1¾Q	Sept. 30, 25	.....	.....	.....	.....	.....	.....
.....	.....	31¾	21⅞		34,914,280	$10	Continental Oil (Maine)	25cQ	Sept. 15 25	28,900	24	24½	23⅜	24¼	+ ¼
20	11¾	17½	10⅝		1,500,000	25	Crescent Pipe Line	.....	Sept. 15, 23	.....	.....	.....	.....	.....	.....
149	110¾	156	132		3,000,000	100	Cumberland Pipe Line	$3Q	Sept. 15, 25	120	143¾	144	142	142½	—1½
105	74	96	66		5,000,000	100	Eureka Pipe Line	$1Q	Nov. 2, 25	80	67½	68	67½	67½	0
69¾	52	65	54		16,000,000	100	Galena Signal Oil	.....	June 30, 25	775	38¾	40	38¾	40	+1
113	100½	105	100		4,000,000	100	do new pfd	$2Q	Sept. 30, 25	10	101	101	101	101	0
116	110	114	103		2,000,000	100	do old pfd	$2Q	Sept. 30, 25	20	107	107	107	107	0
43¾	34½	75	42½		43,750,000	25	Humble Oil & Ref	30cQ	Oct. 1, 25	44,500	72¼	75	69½	75	+2⅝
161	120	154½	127		20,000,000	100	Illinois Pipe Line	$6S.A.	June 30, 25	360	148	151	142	145	—4
.....	.....	34¾	27¼	(sh)	6,491,852	N.P.	Imperial New	25cQ	Dec. 1, 25	8,400	32¾	33	31¾	33	+ ⅛
100	66	84	60	$	5,000,000	50	Indiana Pipe Line	$1Q	Nov. 14, 25	280	60	64	61	64	+2½
24¾	16¾	28¾	22¼	(sh)	7,118,138	N.P.	International Petroleum	25c	Sept. 30, 25	43,400	27⅞	28⅜	27	28¼	+ ½
162	122	186	130½	$	188,247,100	100	Magnolia Petroleum	1%stk.	Oct. 5, 25	14,200	174¾	186	169½	185	+10
25⅞	20⅝	25½	19½		6,362,500	12½	National Transit	25cQ	Sept. 15, 25	1,100	20⅛	20½	20	20½	+ ⅜
97	54½	79	50		5,000,000	100	New York Transit	75cQ	Oct. 15, 25	160	53¼	54	53	54	0
107½	72	88	78		4,000,000	100	Northern Pipe Line	$3S.A.	July 1, 25	150	80½	81	79½	80	— ½
79½	55	75	60¼		60,000,000	25	Ohio Oil Co	50cQ	Sept. 30, 25	3,200	65	66¾	63¾	66¾	+1¼
48	27	44½	20		10,000,000	25	Penn. Mex. Fuel	50c	May 21, 25	600	21⅛	21½	21	21½	— ½
54¾	49½	65½	45⅞		60,000,000	25	Prairie O. & G	.....	July 31, 25	23,600	51	52⅞	49¼	52⅜	+1½
111	100	127½	106		81,000,000	100	Prairie Pipe Line	$2Q	Oct. 31, 25	1,880	124	126¾	123½	126¾	+2¾
230	175	259	200		4,000,000	100	Solar Refining Co	$5S.A.	June 20, 25	30	229	229	225	225	—3
100	80½	103	29		10,000,000	100	Southern Pipe Line Co	$1Q	Dec. 1, 25	290	68½	73	68½	72	+4
171	117	197	139		20,000,000	100	South Penn Oil Co	.....	Sept. 30, 22	530	162½	164	158½	164	0
89	68	84	53		3,500,000	100	Southwest Pa. Pipe Lines	$1Q	Oct. 1, 25	70	53	55	53	55	+2
68¾	54¾	70	59½		223,756,258	25	S. O. Indiana	62½cQ	Sept. 15, 25	63,400	64⅛	66½	63⅛	66	+1⅝
50¼	32½	46	30⅜		8,000,000	25	S. O. Kansas	.....	June 16, 24	4,700	31⅞	33½	30½	33½	+1½
121¾	101	137	114¾		16,864,434	25	S. O. Kentucky	$1Q	Sept. 30, 25	1,800	135½	134¼	132½	133⅞	— ½
262	198	270	231		3,000,000	100	S. O. Nebraska	$5S.A.	June 20, 25	220	260	260	256	260	+ ½
48	37¾	48⅝	40		227,535,300	25	S. O. New York	35cQ	Sept. 15, 25	45,700	44⅞	47⅛	44	46¾	+1⅞
277½	275	369	338		14,000,000	100	S. O. Ohio	$2½Q	Oct. 1, 25	260	363	367	360	367	+5
336	115	123	116		7,000,000	100	do pfd	$1¾Q	Dec. 1, 25	60	116¾	117	116¾	117	0
81	20	27	12½		1,722,931	25	Swan-Finch Oil Corp	.....	Nov. 1, 19	120	18	18	16½	16¾	—2¾
83½	56½	105½	80⅜		61,919,950	25	Vacuum Oil Co	‡50cQ	Sept. 19, 25	20,300	104	104	99¾	103¼	— ¼
30	25	35	30		100,000	10	Washington Oil Co	.....	Jan. 31, 22	10	35	35	35	35	0

Borne Scrymser 82 extra April 15 84 extra Oct. 15 ‡Vacuum 50c extra Mar. 20, June 20, Sept. 19

Houston's Third Quarter Income Is Higher

NEW YORK, Nov. 16.—Net income of Houston Oil Co. for the third quarter of 1925 was $445,045 after depreciation, depletion and taxes. This is equivalent after dividend on the preferred stock to $1.24 a share on the $100 common stock. Net income in the third quarter of 1924 was equivalent to 7 cents a share on the common.

In the first three quarters of 1925 Houston netted $3.62 a share on the common as compared with $5.37 a share in the first three quarters of 1924.

Income accounts for the two third quarters compare:

	1825	1924
Gross earn.	$997,977	$774,133
Exp. & tax	410,432	396,846
Balance	$587,545	$377,287
Deprec. & depl.	142,500	225,936
Net income	$445,045	$151,351

Income accounts for the two three-quarter periods compare:

	1925	1924
Gross earn.	$2,920,479	$3,924,148
Expenses & tax	1,184,419	1,588,653
Net	$1,736,060	$2,335,495
Miscel. income	.....	*125,017
Total income	$1,736,060	$2,460,512
Deprec., depl.	429,522	716,114
Net income	$1,306,538	$1,744,398

*Includes $120,884 profit on sale of capital assets.

Orders for Pipe Falling Off

(Continued from page 91)

trically welded cracking stills for refiners, couplings for oil pipe line and large containers for refineries.

The Standard Oil Co., of Indiana is starting work on a new 2-story storage and distributing plant, 55 x 170 feet at Keystone av. and the Big Four railroad, Indianapolis with boiler plant and other structures. The improvement will cost $200,000 with machinery. J. C. Marshall is district manager.

The Magnolia Petroleum Co., Morrison, Okla., has commenced construction of a natural gasoline plant in the Morrison field with a daily production of at least 5000 gallons. Clark Bros., Co., is understood to have the contract for the compressor equipment. Henry McBrier is superintendent.

The Phillips Petroleum Co., Bartlesville, Okla., proposes to construct a natural gasoline plant in the Artesia, N. M., field and a tentative site has been obtained. M. T. Kirk, First National bank building, Bartlesville, is supervising plans.

The Continental Oil Co., Continental Oil building, Denver, Colo., is contemplating the erection of a new storage and distributing plant at Muskogee, Okla. with automobile service and repair building for the company's motor trucks. It will cost $350,000 with equipment.

New York Bonds

Week Ended Nov. 14

	High	Low	Last	Ch'ge
Amer. Rep. Cor. deb 6s.	97¾	97	97¾	+ ¾
Associated Oil gold 6s..	102⅝	102	102⅝	+ ⅜
Atlantic Refg. deb 5s...	99⅞	99½	99½	— ⅜
Barnsdall Corp. 8s....	105½	105⅜	105½	+ ⅜
Calif. Petrol sf 6½s....	104	104	104	0
Empire Gas & F 7½s...	103¾	102⅞	103¾	0
Humble Oil & Refg. 5½s.....	101⅞	101	101	— ⅜
Mid-Cont Pet. 6½s....	102	101	101⅝	+ ⅝
Pan-Am. P. & T. 7s....	106	105½	105½	— ¼
Pan-Am. P. & T. 6s....	110	105⅝	109¼	+1¾
Pierce Oil deb 8s.....	104¼	104¼	104¼	0
Producers & Refnrs. 8s..	109¾	109¾	109¾	— ¼
Sinclair Con oil con 7s..	94	92¼	94	+1⅞
Sinclair Con oil con 6½s	87¼	86¾	87½	+ ½
Sinclair Con oil 6s....	108½	104½	107¾	+2
Sinclair Crude Oil 6s...	100⅝	100	100½	0
Sinclair Pipe Line sf 5s.	85½	85⅜	85½	+ ¾
Skelly Oil 6½s.....	127¾	115½	126¼	+10
Superior Oil 7s.....	97¼	97	97	— ¼
Union Oil of Calif 6s-A.	103¼	103¼	103¼	0
Union Oil of Calif 5s-B.	100½	100½	100½	0
Union Oil of Calif 5s-C.	95⅜	94⅞	94⅞	+ ¼

New York Curb Bonds

Week Ended Nov. 14

	High	Low	Last	Ch'ge
Cities Serv. 6s.....	90⅝	90½	90½	— ⅛
Cities Serv. 7s B.....	178	178	178	+2
Cities Serv. 7s C.....	126	125½	126	+ ½
Cities Serv. 7s D.....	101½	101½	101½	— ⅛
Cities Serv. 8s E.....	111½	111½	111½	+ ½
Galena S. O. 7s.....	105	104⅞	104⅞	+ ⅛
General Pet 6s.....	101¾	101⅝	101⅝	0
General Pet 5s.....	94⅞	94¾	94⅞	0
Gulf Oil 5s.....	101½	99⅝	99⅝	— ⅛
Pennok Oil 6s.....	100½	100½	100½	0
Phillips Pet 7½ w.w...	104½	104	104	0
Pure Oil 6½s.....	102¾	102¼	102½	+ ⅜
S O N Y 6½s.....	107¼	106¾	107	0
Sun Oil 5½s.....	98	97½	98	+ ⅛
Tidal Osage 7s.....	104	104	104	+ ½
Vacuum Oil 7s.....	105	104¾	104¾	— ¼

New York Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions week ended Nov. 13 Sales	First	High	Low	Last	Ch'ge
.....	.....	11½	2½	....	Amer. Maracaibo..	3,500	7¾	8	6⅞	7⅜	— ¾
7	4	8¾	5	$10	Arkansas Nat. Gas.	1,300	6¾	6⅝	6	6¼	+ ⅛
36⅝	32	45¼	38	25	British-American...	.....	.....	.....	.....	.....	.....
6¾	2¾	7⅞	2¾	25c	Carib. Syndicate...	15,800	6¾	6¾	6⅜	6¾	0
.....	.....	48	35	$20	Cities Service	10,600	38⅞	39	38⅝	39	0
82¾	67¾	84¼	80¼	100	do pfd.....	2,300	83¾	84⅛	83¾	84	0
7¾	6⅜	8	7¾	10	do pfd. B.....	400	7½	7¾	7½	7¾	0
19	13¼	21⅜	17½	10	do bankers' sh...	400	19⅜	19⅜	19⅜	19⅜	+ ⅛
1⅜	.25	2¾	.60	N.P.	Colombia Syndicate	130,800	2⅛	2⅛	1⅝	2⅛	+ ⅛
10⅝	2¾	14⅛	8¼	N.P.	Creole Syndicate...	13,300	11	11½	10¾	11⅛	— ⅛
.....	.....	12¼	6	N.P.	Crown Central	3,700	6¾	7	† 6	7	+ ½
8	1½	7	3	N.P.	Derby Oil & Ref...	500	3½	4⅜	3½	4⅜	+ ⅜
34¾	17½	27	17	N.P.	do pfd.....	.....	.....	.....	.....	.....	.....
.....	.....	3¾	1⅜	N.P.	Gibson Oil.....	20,000	3⅜	3⅝	3	3¼	— ¼
5¾	1¾	5¾	1½	N.P.	Gilliland v.t.c....	.....	.....	.....	.....	.....	.....
67¾	56	84⅞	68½	$25	Gulf Oil Corp.....	33,200	80⅜	*84⅞	79⅜	84⅜	+3¾
7	1¾	5¾	2¼	N.P.	Kirby Petroleum...	3,100	3½	3¾	3¼	3⅝	+ ⅛
6¾	2¾	7⅝	4¼	N.P.	Lago Petroleum ...	184,300	7¼	* 7⅜	6¾	7⅜	+ ⅜
.....	.....	25½	18	N.P.	Lion Oil Refining..	17,600	24⅞	*25½	24¾	25½	+ ¾
4⅜	4	4¾	1¾	N.P.	Marland of Mexico.	.....	.....	.....	.....	.....	.....
1¾	.50	5¾	.56	$10	Mexican-Panuco...	18,300	5	5¼	4½	5	0
1⅜	.97	2	1	1	Mountain & Gulf..	600	1½	1⅜	1½	1⅜	0
20¾	16	24¾	18¾	10	Mountain Prod....	25,800	24⅜	24½	23⅜	24½	0
6¼	3½	6¼	3⅜	5	New Bradford Oil..	3,000	5⅞	6	5⅝	6	+ ⅛
44	17	8¾	5	10	New England Fuel.	.....	.....	.....	.....	.....	.....
.....	.....	19¾	6¾	1	New Mex. & Ariz...	23,900	16⅞	16⅞	14½	16	— ¾
11	8¼	12⅜	8¼	25	New York Oil.....	200	9⅝	9⅝	9⅝	9⅝	— ½
.....	.....	37	25¾	N.P.	Pan-Amer. Western.	.....	.....	.....	.....	.....	.....
6	.70	2	.90	N.P.	Peer Oil Corp.....	11,900	1¾	* 2	1½	1⅞	+ ¼
18¾	12¼	28¾	16	$10	Pennok Oil.....	1,500	25⅛	25⅝	24⅜	25⅜	+ ½
57¾	5¾	44½	16	25	Red Bank Oil.....	1,600	20	24¼	20	21⅝	—2⅜
.....	.....	38⅜	9	N.P.	Reiter-Foster.....	25,100	18¼	22¾	18¼	22⅜	+4
5½	3	9½	3½	N.P.	Ryan Consolidated.	100	4¾	4¾	4¾	4¾	+ ¼
10¾	6	9¼	6¾	$10	Salt Creek Cons....	11,100	8⅜	* 9¼	8⅛	9¼	+ ⅛
27½	19¾	30½	24	10	Salt Creek Prod ...	30,200	29⅞	30¼	28¼	30¼	+ ¼
5¾	1½	5⅞	1¼	5	Savoy Oil.....	.....	.....	.....	.....	.....	.....
.....	.....	46½	33¾	N.P.	Sun Oil.....	8,000	39¾	40½	39	39	— ¾
16¾	6¾	13¾	9	10	Tidal Osage.....	500	9	9½	9	9½	— ¾
4⅝	2¾	4⅞	1¾	5	Venezuelan Pet....	4,900	3⅛	3⅞	3⅛	3⅝	+ ⅛
.....	.....	31¾	22¾	N.P.	Wilcox O. & G. new	3,900	27	27¾	26½	27¾	+ ½
13⅞	4¾	7	3⅞	N.P.	Woodley Petroleum	900	5	5¼	4⅞	5¼	— ⅛

Pittsburgh Stock Exchange

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended Nov. 13 Sales	First	High	Low	Last	Ch'ge
7	4	8¾	5¼	$10	Arkansas Nat. Gas.	1,972	6¼	6½	6⅜	6¼	+ ⅛
40½	35⅜	75¾	69½	N.P.	Columbia Gas.....	.....	.....	.....	.....	.....	.....
.....	.....	18	14½	$10	Devonian Oil.....	235	17	17¼	17	17	0
.....	.....	112⅜	105¾	$100	Duquesne Lt. 7s pfd	55	112⅜	112⅜	x110½	110½	—1½
30	30	110½	90	25	Fayette County Gas	.....	.....	.....	.....	.....	.....
53½	26¾	45½	32¼	25	Lone Star Gas.....	1,685	45	45	44	45	0
33¾	28½	37¾	31	25	Ohio Fuel Corp....	4,419	35⅝	35⅝	34½	34⅝	—1⅛
16¾	11¾	16¾	12⅜	1	Ohio Fuel Oil.....	.....	.....	.....	.....	.....	.....
28½	22¾	32¼	26	25	Oklahoma Nat. Gas	1,031	31¼	31½	31¼	31⅜	+ ⅜
9¾	6	8¾	5	5	Pittsburgh O. & G..	250	5⅝	5¾	5⅝	5⅝	0
10½	6	9	6¼	10	Salt Creek Cons....	3,963	8⅜	*9	8⅛	9	+1
16½	8	13⅜	8¼	10	Tidal Osage.....	710	10½	11	10½	11	+ ¼

Pittsburgh Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended Nov. 13 Sales	First	High	Low	Last	Ch'ge
.....	.....	18½	18½	....	Central Ky. Gas...	.....	.....	.....	.....	.....	.....
1	.20	2½	.60	$5	Colombia Synd....	950	2	2⅛	2	2⅛	+ ⅛
.....	.....	15	13	N.P.	Devonian Oil.....	.....	.....	.....	.....	.....	.....
.70	.25	.60	.15	5	Duquesne Oil.....	.....	.....	.....	.....	.....	.....
9½	5¼	9	5½	10	Forest Oil.....	.....	.....	.....	.....	.....	.....
66¾	57	81½	64	25	Gulf Oil Corp.....	1,700	81½	*81½	81½	81½	.....
23¾	21	.....	.....	N.P.	International Pet..	.....	.....	.....	.....	.....	.....
.....	.....	12½	3¾	N.P.	Leonard Oil & Dvlp	6,900	10⅜	10⅜	9½	9½	— ¾
6	5	.....	.....	$10	Marshall Oil.....	.....	.....	.....	.....	.....	.....
.77	.35	.47	.26	10	Omar O. & G.....	.....	.....	.....	.....	.....	.....
8	3⅜	7	3	5	States Oil.....	.....	.....	.....	.....	.....	.....
.....	.....	4	1 1/16	$1	Texon Oil & Land..	13,800	3⅜	3½	3	3½	+ ⅛
14	10	11	9	10	Tidal Osage.....	175	9½	10	9½	10	0

*New High †New Low xEx-Dividend

Warner-Quinlan Offers To Aid Go-Gas

CLEVELAND, Nov. 14.—Warner-Quinlan Co. has offered to help rehabilitate the Go-Gas Co. which operates a chain of bulk and service stations in the east and which went into a receivership early this year. The offer which calls for the issuance of $700,000 7 per cent 10-year mortgage bonds which will be bought by the Warner-Quinlan Co. for $560,000, has been accepted by owners of 70,043 of the 100,000 outstanding shares of the Go-Gas Co. and disapproved by only 88 shares.

Creditors, stockholders and holders of Go-Gas participating operation certificates may present any protest they may have against the offer in the United States district court for the district of Delaware on Nov. 20.

Proceeds from the sale of the bonds to the Warner-Quinlan Co. are to be devoted to the payment of claims against the Go-Gas Co. excepting $168,000 now secured by mortgages upon the company's gas stations and to the termination of the receivership. Any surplus is to be used as working capital.

The bonds are to be secured by a mortgage on the physical assets of the company and also upon certain stocks and securities it holds.

Two offers have been made for the Go-Gas Co. properties since the receivership was set up early this year. One by the New England Oil Refining Co. was rejected by the court and one by the Sun Oil Co. was later withdrawn by that company.

Financial Notes

Pacific Oil Co.—Rumors current in San Francisco that Pacific would dispose of its holdings in Associated Oil Co. and then pass to the Standard of California have been denied by Hugh Neill, secretary of Pacific.

United Reports Earnings

LOS ANGELES, Nov. 13.—United Oil Co., including Richfield Oil Co., reports for third quarter income of $338,849 after all charges except federal taxes, equivalent to $1.06 a share on the 317,376 outstanding shares of $25 stock. In the nine months ended with September was $1,502,173 after all charges except federal taxes, equal to $4.73 a share.

Cleveland Stock Market

	Par	Nov. 13 Bid	Asked	Last Sale
Canfield Oil Co.	$100	108½	.....	115
do pfd.	100	98	100	95
Fred G Clark Co.	10	.....	2¾	2⅝
National Refin. Co.	25	42½	42¾	42½
do pfd.	100	.....	135	128
Paragon Refin. Co.	25	8	8½	8
do pfd.	100	65	78	65

x-Ex dividend

The Oil Industry Exchange

Positions Wanted

Man thoroughly experienced in all branches of oil refining desires new connection. Box 471.

First class grease maker desires new connection. Case oil and compounding. Box 470.

Salesman with eight years traveling experience, selling refined oil, Gasoline, Lubricating Oils and greases to Distributing and Jobbing trade, also managing and operating Bulk Station and Service Stations. Now with reputable company but desires change where future offers more. Sales record high. Bank and trade references. Eastern or Canadian Territory preferred. Address Box 472, care, National Petroleum News.

Situations Open

Are You an Experienced Oil Man?

If you are, you are bound to be interested in the position which we are now about to fill.

We are a large oil company, operating over an extensive territory, and are now about to enter the Philadelphia field, selling petroleum and all its products, including gasoline.

We want a Manager for our Philadelphia business, one familiar with the oil industry generally, and with the Philadelphia market specifically, in similar capacity. Salary is in keeping with the importance of this position and only men of large Philadelphia oil company experience need apply.

Box 467

Business Opportunities

Jobbers—Marketers

My services, as buyer of Petroleum Products, at your disposal. Small commission. Market information furnished regularly and prompt attention given all requests. Inquiries solicited.

C. Fred Mercer
206 City National Bldg.
Wichita Falls, Texas

Special Winter Zero Oils From Mid-Continent Crude

MOTOR, TRACTOR AND INDUSTRIAL

From Mid-Continent, Gulf Coast and Penna. Crude. Attractive prices for spot or contract, also Gasoline, Kerosene, Distillate, Fuel Oil. Buying orders promptly executed on small commission basis.

Arkoma Petroleum Co.
722-23 Mid-Continent Bldg.
Tulsa, Okla.

For Sale

Two Henry Vogt Machine Co.'s 20-ton Exhaust Steam Absorption Refrigerating Systems, for sale, complete. In first-class condition. Box 272.

Well Established Oil and Gasoline Jobbing Business

Located in Ohio, doing fine volume of business. Have first class equipment and sufficient ground for additional storage. Delivering to about 75 retail stations.

Box 473

For Sale

We are in position to offer a few very choice, high class jobber layouts throughout the general Standard of Indiana territory, likewise in Nebraska and Oklahoma. We earnestly suggest that you get in touch with us if in the market for something of this nature.

Refiners Consolidated Sales Co., Wichita, Kansas.

For Sale

A well established and continually growing oil jobbing business in the South doing a very fine volume of business. $20,000 cash will handle, balance of $22,500 at rate of $1250 per month.

Box 469
Care, National Petroleum News

Gasoline Pumps For Sale

Twenty No. 97 Bowser Sentry pumps for sale. All practically brand new.

Box 465

Wanted to Buy

Wanted To Buy

Established bulk and service stations located in Oklahoma, eastern or southeastern Kansas, southern Iowa, western Missouri and southeastern Nebraska. Must be worth the money. All correspondence will be held confidential. Write fully to

Box 474,
care, National Petroleum News

Miscellaneous

WHAT IT COSTS

For "Position Wanted" advertisements—5 cents per word. Minimum cost $1.00. All other classified advertising—10 cents per word. Minimum cost $3.00. Advertisements set in special type or with border—$4.00 per column inch. Copy must reach us not later than Friday preceding date of issue. All advertisements carried on this page are payable in advance.

ADVERTISERS INDEX

PAGE NUMBERS OPPOSITE ADVERTISEMENTS APPEARING IN THIS ISSUE ONLY

Adamson Mfg. Co.
Allison Coupon Co. 78
Aluminum Paint Co.
American Bridge Co.
American Can Co.
American Car & Foundry Co.
American Oil Corp
American Oil Pump & Tank Co.
American Radiator Co.
American Schaeffer & Budenberg Corp.
American Spiral Pipe Works. 55
American Steel Package Co. 84
American Telephone and Telegraph Co.
Anderson-Prichard Oil Co.
Arcus Ticket Co.
Armstrong Cork & Insulation Co.
Arza Oil Pump Co.
Atlas Petroleum Co.
Attwood Brass Works, Inc.
Autocar Co.
Au-to Compressor Co
Automobile Rotary Lift Co. 2

Barber Co. W. H.
Barnickel & Co., Wm. S. 55
Barnsdall Refg. Co.
Battenfeld Grease & Oil Co.
Beacon Equipment Co.
Bennett Pumps Corp.
Berry's Sons Co., James B. 6
Bessemer Gas Engine Co.
Bethlehem Shipbuilding Corp. 19
Bethlehem Steel Co.
Bettcher Stamping & Mfg. Co. 84
Biggs Boiler Works Co.
Blackmer Rotary Pump Co. 64
Blaw-Knox Co. 14
Bolene Refg. Co.
Bollwerk & Brother, H.
Bowser & Co., Inc., S. F. 63
Brookins Mfg. Co.
Brown Instrument Co. 21
Brown Petroleum Co., R. J.
Brown Sheet Iron & Steel Co.
Brunner Mfg. Co.
Buckeye Iron & Brass Works.
Budd Wheel Co.
Buffalo Meter Co. 79
Butler Mfg. Co.

C-V Equipment Co.
Calorizing Co.
Cameron, A. S. Steam Pump Works (Ingersoll-Rand Company).
Canfield Oil Co., Cleveland.
Carbide & Carbon Chemicals Corp.
Caward-Dart Co.
Champion Pneumatic Mach. Co.
Champion Tank & Mfg. Co.
Champlin Refining Co.
Chapman Valve Mfg. Co.
Chestnut & Smith Corp.
Chicago Bridge & Iron Works. 47
Chicago Tubing & Braiding Co.
Cincinnati Ball Crank Co.
Clark Bros.
Clark Co., Fred G.
Classified Advertising Section.
Cleveland Brass Mfg. Co. 3
Cleveland Steel Barrel Co.
Columbia Oil Co.
Columbian Steel Tank Co.
Conewango Ref. Co.
Continental Motors Corp.
Continental Ref. Co.
Cook Paint & Varnish Co.
Correct Measure Co.
Craig & Co., Ltd., A. F.
Crane Co. 8
Crown Central Petroleum Corp.
Curtis Pneumatic Machinery Co.
Cushing Refg. & Gasoline Co.

Davis Welding & Mfg. Co. Inside Back Cover
Dawes Electric Sign & Mfg. Co.
Dayton Pump & Mfg. Co. Inside Front Cover
Deepwater Oil Refineries.
Dempster Mill Mfg. Co.
Des Moines Foundry & Machine Co.
Detroit Graphite Co.
Dixie Mfg. Co.
Doelker Co., J. R.
Donoghue, David.
Doty Pump Co., J. G.
Draper Mfg. Co.
Du Pont Everdur Co.

Economy Engineering Co.
Edwards Mfg. Co.
Edward Valve & Mfg. Co.
Ehrlich Safe & Lock Co.
Elk Refining Co.
Emerson-Scheuring Tank Co.
Empire Oil & Grease Co.
Empire Refineries, Inc. 13

Fain, William H.
Farrell Mfg. Co.
Ferer & Sons, Aaron.
Fleckenstein Visible Gasometer Co. of Michigan
Flexlume Corp.
Foamite-Childs Corp.
Ford Motor Co.
Franklin Valveless Engine Co.
Frontier Mfg. Co.
Fuller & Sons Mfg. Co.

Galena Signal Oil Co.
General American Tank Car Corp.
General Motors Truck Co.
Geuder, Paeschke & Frey Co.
Gibb Petroleum Corp.
Gilbert & Barker Mfg. Co.
Glidden Co.
Globe Mfg. Co.
Globe Oil & Refg. Co. 15
Gomory, W. L.
Goodrich Rubber Co., B. F.
Graham Brothers.
Graver Corp.
Groetken Pump Co.
Guarantee Liquid Measure Co. 16-17
Gulf Ref. Co. 65

Handy Oiler Co.
Hayes Equipment Mfg. Co.
Heil Co., The.
Highland Body Mfg. Co.
Hope Engineering & Supply Co. 69
Hughes Tool Co
Humble Oil & Refining Co. 73
Hunt, C. B. & Son.
Huntley & Huntley
Hyde-Schneider Haley Mfg. Co. 21

Illinois Glass Co.
Imperial Oil Marketing Co.
Independent Oil & Gas Co.
Independent Oil Men of America. 74
India Tire & Rubber Co.
Indian Refg. Co.
Ingersoll-Rand Co.
(A. S. Cameron Steam Pump Works)
International Harvester Co.
Irving Iron Works Co.

Jenkins Bros.
Johns-Manville Co., H. W.
Jones & Co., Elliott.

Kanotex Ref. Co. 78
Keen & Woolf Oil Co.
Kellogg Co., M. W.
Kellogg Mfg. Co.
Klean Rite Auto Laundry Co.

Lake Petroleum Co.
Lancaster Iron Works.
Leader Iron Works. 82
Lee Mercantile Co., H. D.
Lewis-Shepard Co.
Linde Air Products Co.
Luce Trunk Co. 78
Lucey Mfg. Co.
Ludlow Valve Mfg. Co.

Marks, Alfred C.
Marland Refg. Co.
Mars Company.
Marvel Equipment Co.
McDonald Mfg. Co., A. Y.
McNally & Co., Rand. 61
McSavaney Co.
Merit Oil Equipment Co.
Metal Hose & Tubing Co. 24
Metric Metal Works.
Meyercord Co.
Midland Specialties Co.
Miller & Co., Inc. Max B.
Miller Petroleum Co.
Miller Sons Co., A. D.
Milwaukee Tank Works.
Morrison Bros.
Mullins Body & Tank Co.

National Carbon Co., Inc.
National Checking Co.
National Distributing Co.
National Gasoline Hose Co.
National Petroleum Marketers Assn. 74
National Petroleum Mutual Fire Ins. Co.
National Petroleum News. 12-20
National Recording Pump Co.
National Refining Co. 82
National Transit Pump & Machine Co. 72
Neil & Co., Wm.
Novo Engine Co.

Ohio Valley Ref. Co.
Ohmer Fare Register Co.
Oil Conservation Engineering Co.
Opalume Sign System, Inc.
Owosso Boiler & Welding Co.
Oxweld Acetylene Co.

Palm Fechteler & Co.
Pennsylvania Refg. Co.
Pennzoil Co.
Petroleum Iron Works Co.
Pforzheimer & Co., Carl H.
Phillips Co., Waite.
Platt Co., W. C. 86
Pressed Steel Tank Co.
Prest-O-Lite Co. 7
Producers & Refiners Corp.
Professional Card Section.
Progress Mfg. Co.
Pulte-Korreck Machine Co.
Pure Oil Co.

Quincy Compressor Co. 9

Raymond Garage Equipment Co.
Reading Steel Castings Co., Inc.
Reeves Bros. Co.
Refinery Products Directory. 76-77
Rhodes Co., Jay B.
Richmond Engineering Co.
Roper Corp., Geo. D. 61
Rothermel & Co.
Roxana Petroleum Corp.
Roy Sales Co., Inc.
Royer Pump & Equipment Co.

St. Louis Can Co. Insert
St. Louis Pump & Equipment Co.
St. Louis Steel Package Co. 82
Savegas Pump Sales Corp.
Sharples Specialty Co. 4
Sherwin-Williams Co.
Sinclair Refining Co. 80
Skelly Oil Co.
Spencer Petroleum Co. 71
Standard Tank Car Co.
Steinke Bros. Mfg. Co.
Stevens Grease & Oil Co.
Stevens Oil & Grease Co. A. J.
Stewart Bros. Paint Co.
Sun Oil Company. 11

Texhoma Oil & Refg. Co. 23
Tide Water Oil Co. 72
Tiona Petroleum Co. 66
Tokheim Oil Tank & Pump Co. 10
Transcontinental Oil Co. 52
Truscon Steel Co. 1

Union Metal Mfg. Co.
United Filters Corp. 5
United Lead Co.
U. S. Air Compressor Co.
United States Cast Iron Pipe & Foundry Co.
Universal Oil Products Co. 49

Van Tine, C. C.
Viking Pump Co.
Vilter Mfg. Co. 58
Visible Pump Co. 18
Vogt Machine Co., Henry.

Wackman Welded Ware Co.
Waverly Oil Works Co.
Wayne Tank & Pump Co. Outside Back Cover
Wescott Valve Co.
Wheaton Brass Works, A. W. 42
White Co.
White Eagle Oil & Refg. Co.
White Engineering Corp., J. G.
Wichita Pump & Equip. Co.
Williams Sealing Corp.
Wilson & Bennett Mfg. Co. 22
Wilson Welder & Metals Co., Inc. 71
Worthington Pump & Machinery Corp.

York Safe & Lock Co.
Youngstown Boiler & Tank Co.
Youngstown Welding Co.